



U.S. Department  
of Transportation

**National Highway  
Traffic Safety  
Administration**

400 Seventh Street, S.W.  
Washington, D.C. 20590

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NATIONAL CAPITOL SYSTEMS, INC.

[REDACTED]  
[REDACTED] V [REDACTED]

AIRBAG INVESTIGATION

CASE NO. 93-05

[REDACTED] [REDACTED], GEORGIA

Contract No. DTHN 22-87-C-17169

Prepared for:

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
Washington, D.C. 20590

NATIONAL CAPITOL SYSTEMS, INC.

AIRBAG INVESTIGATION

CASE NO. 93-05

**[REDACTED]** COUNTY, GEORGIA

TECHNICAL REPORT

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No.		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle NCSI Air Bag Investigation Case No.				5. Report Date	
				6. Performing Organization Code	
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9. Performing Organization Name and Address National Capitol Systems, Inc. ██████████ P.O. Box 1100 ██████████				10. Work Unit No.	
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12. Sponsoring Agency Name and Address U.S. Department of Transportation NHTSA - National Highway Traffic Safety Administration				13. Type of Report and Period Covered Technical Report Accident Date : █/█/92	
				14. Sponsoring Agency Code	
15. Supplementary Notes  On-site investigation of an airbag deployment accident involving an airbag equipped 1991 Mercury Capri convertible and a 1986 Pontiac Grand Am. The driver of the Capri contended that the airbag deployed inadvertently and remained inflated afterwards.					
16. Abstract  This report focuses on a 1991 Mercury Capri convertible which was struck in the right side by the frontal surface of a 1986 Pontiac Grand Am. The velocity change of the Capri (estimated at 24 kph) was of sufficient magnitude to deploy the driver airbag system.  The driver of the Capri was a 25 year-old female approximately 159 centimeters in height and 48 kilograms in weight. She claimed that her airbag deployed prior to impact, and when she stopped the Capri in the roadway, it was struck by the Grand Am. She stated that her airbag remained inflated and she was unable to exit the vehicle through the driver's door and at the time her vehicle was struck, she was trying to exit through the right door.  She suffered head injuries with loss of consciousness, lung contusions, kidney contusion, and facial abrasions and contusions and was hospitalized following the accident.  During the investigation of the accident, it was determined that the Capri was moving at the time it was struck by the Grand Am and that there was no reason for the airbag to have remained inflated after the initial deployment. There are many inconsistencies between the driver's statements and the investigator's opinion of what occurred in this accident.					
17. Key Words  Airbag deployment, airbag				18. Distribution Statement  General Public	
19. Security Classif. (of this report)  None		20. Security Classif. (of this page)  None		21. No. of Pages  107	
22. Price					



## TABLE OF CONTENTS

<u>Item</u>	<u>Page No.</u>
Summary	1
Accident Schematic	3
Identification	4
Ambience	4
Roadway	4
Traffic Controls	5
Vehicles	5
Vehicle Damage	6
Collision Sequence	7
Vehicle Velocity Estimates	8
Relevant Safety Issues	8
Human Factors/Occupant Data/Airbag Vehicle	9
Driver Injuries	10
Driver Kinematics	10
Human Factors/Occupant Data/Vehicle #2	11
List of Attachments	12
Other Source of Data	12
Selected Prints	13
Police Photographs	31
Slide Index	33
Appendix A: Police Accident Report	35
Appendix B: NASS Data Collection Forms	40
Appendix C: NICB V.I.N. Data	91
Appendix D: Airbag Supplement	94
Appendix E: CRASH 3 Output	101

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The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration.

The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the precrash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

NCSI Indepth Accident Investigation Team  
Airbag Accident Investigation  
NCSI Case 93-05  
[REDACTED] County, Georgia

SUMMARY

This is an in-depth study of an accident involving an airbag equipped 1991 Mercury Capri convertible and a 1986 Pontiac Grand Am. The accident occurred on [REDACTED], 1992 at [REDACTED] hours, on [REDACTED] Road, approximately 1.3 miles east of [REDACTED], Georgia in rural [REDACTED] County. The accident was investigated on-site by the [REDACTED].

In the vicinity of the accident, [REDACTED] Road is a two-lane undivided asphaltic aggregate road with one eastbound and one westbound travel lane. The roadway has a grade of +10 per cent for the Capri and -10 per cent for the Grand Am. The speed limit is 45 miles per hour. The roadway was wet from recent rain, but it was not raining when the accident occurred.

According to the police accident report, the Capri was traveling east on [REDACTED] Road and the Grand Am was traveling west on [REDACTED] Road. The Capri traveled into the path of the Grand Am. The right front of the Grand Am struck the right rear quarter panel of the Capri. The Capri rotated clockwise and the vehicles sideslapped, with the right side of the Grand Am striking the right side of the Capri. After the impacts with the Grand Am, the Capri departed the road on the north side and struck an embankment and came to rest approximately 21 feet east of the initial impact with the Grand Am. The Grand Am rotated clockwise and came to rest approximately 48 feet west of the initial impact with the Capri.

An interview was conducted with the driver of the Capri. Her statement was as follows: I was traveling along [REDACTED] Road when my airbag suddenly and unexpectedly inflated. My vehicle did not strike anything prior to the inflation of the airbag. After the airbag inflated, I applied my brakes and stopped the vehicle in the road. After my vehicle was stopped, I was attempting to crawl from between the inflated airbag and the driver's seatback, and as I was moving from the driver's seat to the right front seat, the Grand Am struck my vehicle. The impact resulted in my striking the right side dash and windshield. My airbag remained tightly inflated after it went off and this was the reason I couldn't get out the driver's door and was trying to get out the right door when I was hit.

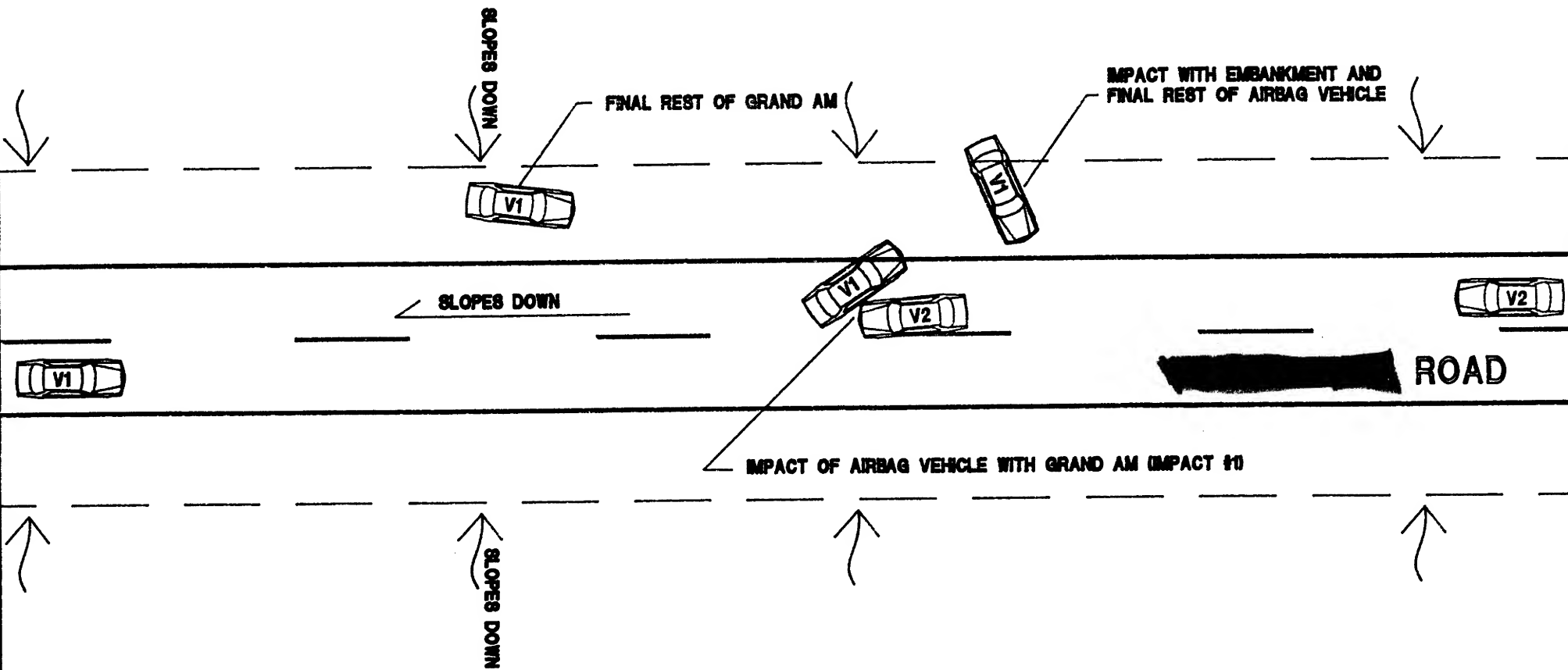
The driver of the Grand Am stated that the Capri spun out of control and into the westbound travel where it was struck by her vehicle.

During the inspection of the Capri, no evidence was found to support the argument that the airbag remained inflated tightly for an extended period of time. Also, it would be physically impossible for the Capri to travel any distance east of the point of impact if it was not moving at the time it was struck by the Grand Am, which was traveling west.

In the opinion of this investigator, the Capri was traveling east and was in motion at the time of the impact with the Grand Am. It may possible that the occupant contacts to the airbag, floor-mounted console, windshield, right dash and glove compartment door were from the driver, but appears that there may have been more than one occupant in the Capri.

The driver of the Capri and the driver and front right occupant of the Grand Am suffered serious injuries and were transported for medical treatment.

A CDC of 01-RZEW-2 was assigned to the damage to the airbag-equipped Capri from the initial impact with the Grand Am. Maximum residual crush to the right side of the Capri was approximately 18 centimeters, located a short distance forward of the rear axle. A CRASH 3 reconstruction of the Delta V (speed change) using CDC data only, resulted in an estimated total Delta V of 24 kilometers per hour for the Capri and 22 kilometers per hour for the Grand Am. These should be considered as estimates only, as the Grand Am was not inspected, but CDC's were assigned from photographs.



LEGEND OF SYMBOLS	
V1 - AIRBAG VEHICLE (1991 MERCURY CAPRI)	
V2 - OTHER VEHICLE (1986 PONTIAC GRAND AM)	
NATIONAL CAPITOL SYSTEMS, INC.	SCALE: 1" = 20'

NHTSA SOUTH CENTRAL STATES INDEPTH ACCIDENT INVESTIGATION TEAM	CASE NUMBER 83-05
ACCIDENT DATE: [REDACTED] 1992	LOCATION: [REDACTED] ROAD, [REDACTED] COUNTY, GEORGIA

NCSI IN-DEPTH ACCIDENT INVESTIGATION  
AIRBAG ACCIDENT INVESTIGATION

FLEET - Private Owner  
LOCATION - [REDACTED] Georgia  
CASE NO. - 93-05

IDENTIFICATION

Location/Street: [REDACTED] Road  
Area/Type: Rural  
Accident Date/Time: [REDACTED] 1992 [REDACTED] hours  
Notification Date: [REDACTED] 1993  
Investigating Police Agency: [REDACTED]  
Accident Type: Car / Car - Angle impact  
Air Bag Vehicle  
Occupant Injury Severity: Severe (AIS-4)

AMBIENCE

Viewing Conditions: Daylight  
Weather: Cloudy  
Precipitation: None at time of accident  
Road Surface: Wet from recent rain

ROADWAY

Location: [REDACTED] Road (County road)  
Type: Arterial  
Width: 5.8 meters  
Number of Lanes: Two  
Median: None  
Surface Material: Asphaltic aggregate  
Road Edge: Gravel shoulders  
Traffic Density: Moderate

ROADWAY, CONTINUED

Coefficient Of Friction: .70 (estimated)  
Vertical Alignment: 10 % grade  
Horizontal Alignment: Straight

TRAFFIC CONTROLS

Signals/Signs: None  
Speed Limit: 45 miles per hour

VEHICLES

	<u>Airbag Vehicle</u>	<u>Vehicle #2</u>
Year:	1991	1986
Make:	Mercury	Pontiac
Model:	Capri	Grand Am
Body Style:	Convertible	Four-door sedan
V.I.N.:	6MPCT01Z3M8*****	1G2NV69L3GC*****
Exterior Color:	White	Blue
Odometer Reading:	19243 miles	94101 miles
Securiflex Windshield:	Unknown	
Windshield Damage:	Yes	
Engine:	Unknown	
Transmission:	Five speed w/ floor mounted shifter	
Steering:	Power-assisted	
Brake System:	Power-assisted	
Interior Padding:	Instrument panel, door panels, arm- rests, head re- straints, sunvisors, upper "A" pillars, steering wheel.	

# VEHICLES, CONTINUED

Driver Active  
Restraint System  
Availability: Active three-point  
lap and shoulder belt

Driver Active  
Restraint System  
Usage: None used

Usage Source: PAR and vehicle  
inspection

Passive Restraint  
System: Driver airbag

## VEHICLE DAMAGE

	<u>Airbag Vehicle</u>	<u>Vehicle #2</u>
Object Struck:	Vehicle #2	Airbag Vehicle
Event Number:	One	One
Damage Location:	Right side	Front
CDC:	01-RZEW-2	12-FZEW-3 (Estimate)
Tow Status:	Towed	Towed
Exterior Damage:	The right side of the Capri was struck by the front right of the Grand Am in an angle impact. The principal direction of force was approximately 30 degrees on the Capri. Direct damage extended approximately 201 centimeters along the right side of the Capri. Direct plus induced damage extended a length of approximately 220 centimeters along the right side of the vehicle, starting at approximately 85 centimeters behind the front axle. Maximum residual crush to the right side surface was approximately 18 centimeters, located at C4.	The frontal and front right surface of the Grand Am struck the right side of the Capri in an angle impact. The Grand Am was not inspected by the author of this report. The CDC assigned in this report is from photos of the vehicle.



## VEHICLE DAMAGE, CONTINUED

Crush measurements  
taken along the right  
side plane were:

C1 = 0.0 cm  
C2 = 11.0 cm  
C3 = 13.0 cm  
C4 = 18.0 cm (est.)  
C5 = 6.0 cm (est.)  
C6 = 0.0 cm

Damaged  
Components:

Damaged components  
included all frontal  
components, grille,  
hood, windshield,  
doors, roof, etc.  
See photos.

Damaged components  
included all frontal  
components, hood,  
grille, windshield,  
etc. See photos.

Interior Damage:

Deployed airbag,  
cracked console,  
deformed right side  
instrument panel,  
broken right front  
air-conditioning  
vent, and windshield  
cracked by occupant  
contact.

Unknown

## COLLISION SEQUENCE

Pre-crash:

At approximately [REDACTED] hours on [REDACTED],  
1992, the case vehicle, a 1991 Mercury Capri  
convertible equipped with a driver airbag  
supplemental restraint system, was traveling  
east on [REDACTED] Road, a rural [REDACTED] road.  
A 1986 Pontiac Grand Am was traveling west on  
[REDACTED] Road. The Capri traveled into the  
westbound lane into the travel path of the  
Grand Am.

Crash:

The front right corner of the Grand Am  
impacted the right side of the Capri.  
Following the initial impact, the vehicles  
sideslapped, with the right side of the Capri  
striking the right side of the Grand Am.

Post-crash:

After the sideslap, both vehicles rotated  
clockwise and departed the roadway. The  
Capri struck the back slope of the ditch  
north of the road and came to rest approxi-  
mately 21 feet east of the first impact  
facing south. The Grand Am traveled  
approximately 48 feet after the first impact  
and came to rest on the north shoulder facing  
east.

Police [REDACTED] were notified of the  
Activities: accident at [REDACTED] and arrived on site at [REDACTED]

Rescue All three occupants of the vehicles were  
Activities: transported to hospitals for treatment.

#### VEHICLE VELOCITY ESTIMATES

A CRASH 3 computer reconstruction of the accident yielded a speed change (Delta-V) of 24 kilometers per hour for the Capri, with a longitudinal speed change of -21 kilometers per hour and a lateral speed change of -12 kilometers per hour. Delta-V values for the Grand Am were 22 kilometers per hour for total Delta-V with -21 kilometers per hour for the longitudinal component and 4 kilometers per hour for the lateral component. These values should be considered as estimates because the C values for the Grand Am were estimated from police photographs.

#### RELEVANT SAFETY ISSUES

##### Applicable Standards: FMVSS 208:

Occupant Crash Protection: The 1991 Mercury Capri was equipped with a factory installed driver supplemental airbag restraint system. The driver airbag was deployed during the crash.

HUMAN FACTORS/OCCUPANT DATA/AIRBAG VEHICLE

DRIVER DATA

Age:	25
Sex:	Female
Height:	62 1/2" inches
Weight:	105 lbs.
Occupation:	Business owner
Active Restraint System Usage:	None used
Usage Source:	Police Accident Report
Vision:	Apparently normal
Vehicle Familiarity:	Drives daily
Route Familiarity:	Unknown
Manner of Leaving Scene:	Ambulance
Type of Medical Treatment:	Hospitalized for 6 days
Physical State:	Apparently normal
Psychological State:	Apparently normal

## DRIVER INJURIES

<u>Injury Description</u>	<u>Severity</u>	<u>Source</u>
Head injury with brain swelling and loss of consciousness	Severe (AIS-4)	Windshield
Lung contusions	Moderate (AIS-3)	Instrument panel
Kidney contusion	Moderate (AIS-2)	Instrument panel
Laceration to forehead	Minor (AIS-1)	Windshield
Abrasions to forehead	Minor (AIS-1)	Windshield

## Injury Coding

O.I.C.						Direct/		Source
Body			System/	A.I.S.	Injury	Indirect	of	
Region	Aspect	Lesion	Organ	Severity	Source	Injury	Data	
1st	H	U	C	B	4	01	2	7
2nd	C	S	C	P	3	11	2	7
3rd	M	U	C	K	2	11	1	7
4th	F	S	L	I	1	01	1	7
5th	F	S	A	I	1	01	1	7

## DRIVER KINEMATICS

The driver was in an unknown position at the time of the crash and was not restrained by the active three-point lap and shoulder belt system of the Capri.

## HUMAN FACTORS / OCCUPANT DATA / VEHICLE #2

### DRIVER DATA

Age: 32  
Sex: Female  
Height: Unknown  
Weight: Unknown  
Active Restraint  
System Usage: None used  
Usage Source: Police Accident Report  
Manner of Leaving Scene: Ambulance  
Type of Medical Treatment: Unknown

### DRIVER INJURIES

The driver of the Grand Am suffered unknown injuries in the crash.

### OCCUPANT #2 DATA

Age: 4  
Sex: Female  
Height: Unknown  
Weight: Unknown  
Active Restraint  
System Usage: Three-point lap  
and shoulder belt  
Usage Source: Police Accident Report  
Manner of Leaving Scene: Ambulance  
Type of Medical Treatment: Hospitalized

### OCCUPANT INJURIES

The front-right occupant of the Grand Am suffered unknown injuries in the crash.

LIST OF ATTACHMENTS

Appendix A: Police Accident Report

Appendix B: NASS Data Collection Forms

Appendix C: Airbag Supplement Form

Appendix D: CRASH 3 Output

OTHER SOURCES OF DATA

Interview with driver of airbag vehicle

Interview with investigating police officer

SELECTED PRINTS  
NCSI Case No. 93-05



1. Pre-impact travel path of the 1991 Mercury Capri convertible (airbag equipped vehicle) east on Road in Georgia.



2. Path into impact and area of impact with the 1986 Pontiac Grand Am.





3. Path of Capri from impact with the Grand Am to impact with the road edge embankment and final rest.



4. Opposite view from beyond impact with the Grand Am.





5. Opposite view from embankment impact and final rest.



6. Pre-impact travel path of the 1986 Pontiac Grand Am west on Road.





7. Path into impact and area of impact with the Capri.



8. Path of the Grand Am from impact to final rest.





9. Opposite view from beyond impact.



10. Opposite view from final rest.





11. Front-left overall view of the 1991 Mercury Capri convertible (airbag vehicle).



12. Left side view.





13. Rear-left view.



14. Rear view showing damage from impact with the embankment (impact #3).



15. Second rear view of damage from impact #3.





16-17. Views along rear stringline from the left side and right side.





18. Rear-right view.



19. Right side view of damage from first impact with the Grand Am.





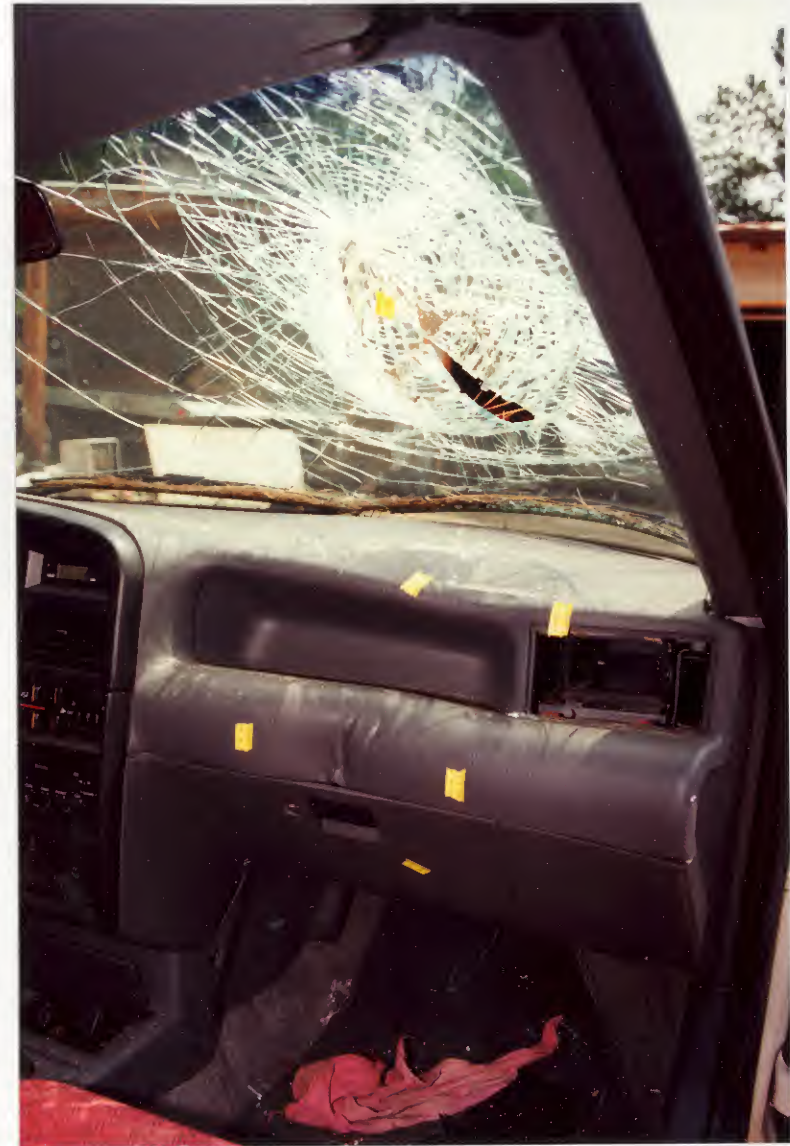
20-21. Views along the right side plane showing crush from the first impact with the Grand  
Am.

BEST AVAILABLE



22. Right side view showing damage from the sideslap with the Grand Am (impact #2).





23-24. Interior views showing obvious occupant contacts to windshield and right instrument panel.





25. Right instrument panel showing obvious occupant contact points.



26. View of right instrument panel and right door.





27-28. Front seats and seatbacks showing possible contacts and obvious contact to console.





29-30. Views of airbag equipped steering wheel.



31. Overall view of deployed airbag showing possible occupant contact.



32. Closeup view of possible make-up transfer on deployed airbag.





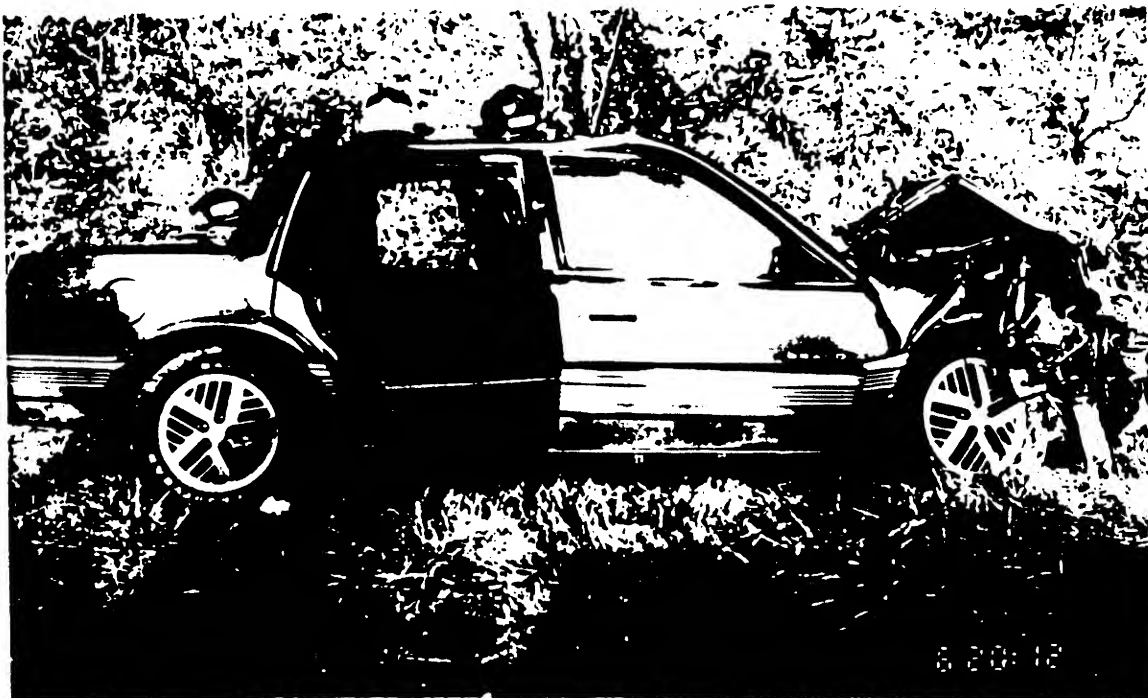
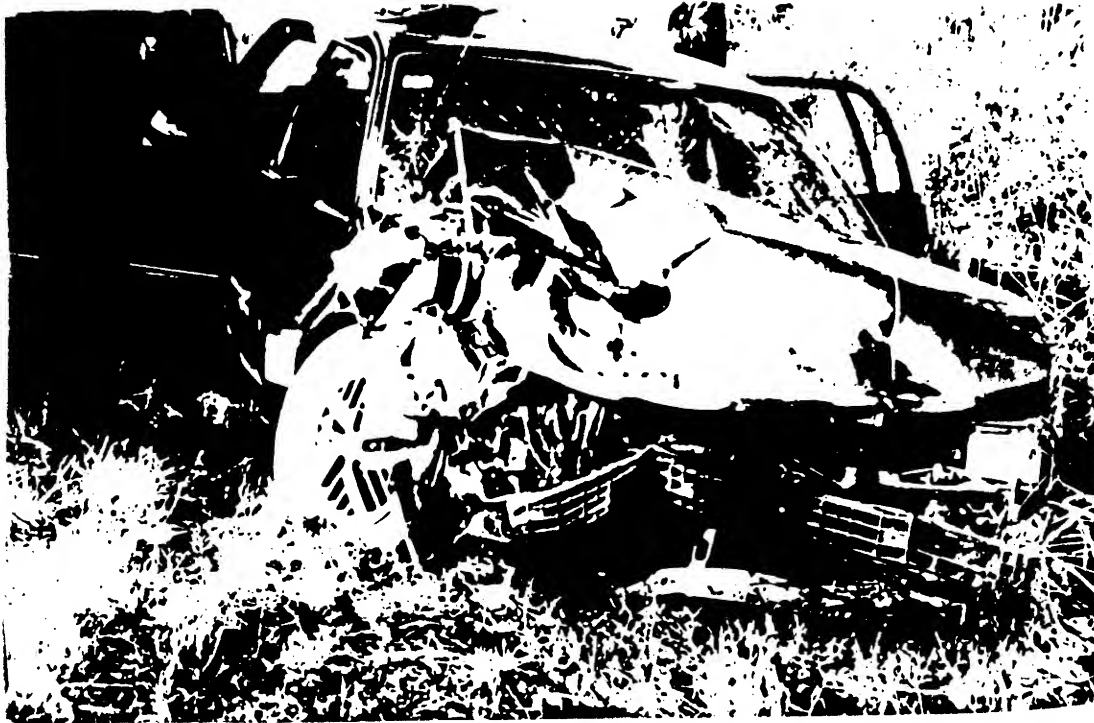
33. Views of slight tear in airbag material and unobstructed vent holes in the back of the airbag.



POLICE PHOTOGRAPHS  
NCSI Case 93-05



Photos of the 1991 Mercury Capri convertible (light colored vehicle) and 1986 Grand Am (dark vehicle) at final rest.



Photos of damage the Grand Am. These are copies of the police photos taken at final rest.

SLIDE INDEX  
NCSI Case 93-05

SCENE SLIDES

1. Pre-impact travel path of the 1991 Mercury Capri convertible (equipped with a driver airbag) east on ~~Reynolds~~ ~~Capri~~ Road in ~~DeKalb~~ ~~County~~ County, Georgia.
2. Path into impact with the 1986 Pontiac Grand Am.
3. Area of impact with the Grand Am.
- 4-6. Path of the Capri from impact with the Grand Am impact with the roadside embankment and final rest.
7. Opposite view from beyond impact with the Grand Am.
8. Opposite view from beyond final rest.
9. Pre-impact travel path of the 1986 Pontiac Grand Am west on ~~Reynolds~~ ~~Capri~~ Road.
10. Path into impact with the Capri.
11. Area of impact of the Grand Am with the Capri.
- 12-14. Path of the Grand Am from impact with the Capri to final rest.
15. Opposite view from beyond impact with the Capri.
16. Opposite view from beyond final rest.

VEHICLE SLIDES

17. Frontal view of the 1991 Mercury Capri convertible (equipped with a driver airbag).
18. Front-left overall view.
19. Rear-left overall view.
20. Rear view.
- 21-25. Views of damage to the rear from impact with the embankment (impact #2).
26. Right side overall view.
- 27-29. Views of damage to the right side from impact with the Grand Am (impact #1).
30. Front-right overall view.
31. Interior view of driver's door.
- 32-34. Views of airbag-equipped steering wheel.

- 35-38. Overall views of front instrument panel, windshield and steering assembly. Occupant contacts were noted to the airbag, right side of the windshield, and right side instrument panel.
- 39. View of right front door interior.
- 40. View of driver's knee bolster.
- 41. View of right dash showing deformation from occupant contact.
- 42-43. Views of driver and front-right seatbacks.
- 44-45. Views of floor mounted console and shifter showing occupant contact and deformation.
- 46-49. Views of deployed airbag showing make-up transfer and tear in airbag fabric.



NC 8305 #1



NC 9305 #2



NC 9305 #3



NC 9305 #4





NC 9305 #5



NC 9305 #6



NC 9305 #7



NC 9305 #8



NC 9305 #9



NC 9305 #10



NC 9305 #11



NC 9305 #12





NC 9305 #13



NC8305 #14



NC 9305 #15



NC8305 #16



NC 8305 #17



NC9305 #18



NC9305 #19



NC 8305 #20





NC 9305 #21



NC 8305 #22



NC 9305 #23



NC 9305 #24



NC9305 #25



NC9905 #26



NC 9305 #27



NC 9305 #28





NC 9305 #29



NC 9305 #30



NC9305 #31



NC 9305 #32



NC 8305 #33



NC 8305 #34



NC 9305 #35  
Best Available



NC 9305 #36  
Best Available





NC 9305 #37  
Best Available



**NC 9305 #38**  
**Best Available**



NC 9305 #39  
Best Available



NC 9305 #40



NC 8305 #41



**NC 9305 #42**  
**Best Available**



**NC 9305 #43**  
**Best Available**



NC 9305 #44  
Best Available





NC9305 #45  
Best Available



NC 9305 #48  
Best Available



NC 9305 #47  
Best Available



NC 9305 #48



NC9305 #49

Appendix A  
Police Accident Report

Accident No. [redacted] Agency NCIC No. [redacted] **GEORGIA UNIFORM MOTOR VEHICLE ACCIDENT REPORT** Date Received by DPS [redacted]

City [redacted] 92 DAY OF WEEK Sun M T W Th F S Time 1235 Dept. Notified 1242 Off. Notified 1242 Off. Arrived 1321 Total No. Vehicles 2 Total No. Injured 3 Total No. Fatalities 0

County [redacted] 1.3 MILES 1 North 3 East 3 West 0 Inside 0 Outside 0 City of: [redacted]

Mile Post [redacted] Road of Occurrence [redacted] Road At Its Intersection With 1 Interstate 2 Lowest St. Rt. 3 Co. Road 4 City St. 1 Interstate 2 Lowest St. Rt. 3 Co. Road 4 City St.

at Intersection 630 1 Miles 1 North 3 East 2 South 4 West 0 City of: [redacted]

But: 1 Interstate 2 Lowest St. Rt. 3 Co. Road 4 City St. 5 Co. Line

and continuing in the direction checked above to next reference point is: 1 Interstate 2 Lowest St. Rt. 3 Co. Road 4 City St. 5 Co. Line

Veh. No. 1 Driver Last Name [redacted] First [redacted] Middle [redacted] Address [redacted] City [redacted] State [redacted] Zip [redacted] Drivers License No. [redacted] State GA Class C D.O.B. [redacted] Sex 1 M 2 F

RACE [redacted] DRIVER CONDITION 1 Not drinking 2 Drinking, not impaired 3 Not known U.I. 4 U.I. Alcohol 5 U.I. Drugs 6 Physical impairment (Mental, sick, etc.) 7 Apparently fell asleep 8 Distracted (something in veh.)

U.I. Test given 1 Yes 2 No Type 1 Blood 2 Breath 3 Urine Results pending %

Same as Driver [redacted] Owners Last Name [redacted] First [redacted] Middle [redacted] Address [redacted] City [redacted] State [redacted] Zip [redacted]

Year 1991 Make Mercury Model Capri Odometer 19243 V.I.N. 6MPCT01Z3M8 License Plate No. [redacted] State GA Year 92 Vehicle Color White Trailer Plate No. [redacted] State [redacted] Year [redacted] Driver Phone Number [redacted]

VEHICLE TYPE 1 passenger car 2 pickup truck 3 tractor (only) 4 tractor trailer (under 46 ft.) 5 tractor trailer (over 46 ft.) 6 tractor with twin trailers 7 logging truck 8 logging tractor trailer 9 tri-axle truck 10 panel truck/van 11 other truck 12 vehicle with trailer 13 bus 14 truck towing house trailer width: Ft. 15 ambulance 16 motorized recreational veh. 17 motorcycle, scooter, minibike 18 moped 19 bicycle 20 farm or construction equip. 21 train 22 all terrain vehicle 23 other (specify) Hazardous Material? 1 Yes 2 No

VEHICLE MANEUVER 1 turning left 2 turning right 3 making U-turn 4 stopped 5 straight 6 changing lanes 7 backing 8 parked 9 passing 10 entering/leaving parking 11 entering/leaving driveway

Insurance Co. and/or Agency [redacted] Policy No. [redacted] Vehicle removed by: [redacted] Citations NONE

Veh. No. 2 Driver Last Name [redacted] First [redacted] Middle [redacted] Address [redacted] City [redacted] State [redacted] Zip [redacted] Drivers License No. [redacted] State GA Class C D.O.B. [redacted] Sex 1 M 2 F

RACE [redacted] DRIVER CONDITION 1 Not drinking 2 Drinking, not impaired 3 Not known U.I. 4 U.I. Alcohol 5 U.I. Drugs 6 Physical impairment (Mental, sick, etc.) 7 Apparently fell asleep 8 Distracted (something in veh.)

U.I. Test given 1 Yes 2 No Type 1 Blood 2 Breath 3 Urine Results pending %

Same as Driver [redacted] Owners Last Name [redacted] First [redacted] Middle [redacted] Address [redacted] City [redacted] State [redacted] Zip [redacted]

Year 1986 Make Pontiac Model Grand Am Odometer 94101 V.I.N. 1G2NV69L3GC License Plate No. [redacted] State GA Year 92 Vehicle Color Blue Trailer Plate No. [redacted] State [redacted] Year [redacted] Driver Phone Number [redacted]

VEHICLE TYPE 1 passenger car 2 pickup truck 3 tractor (only) 4 tractor trailer (under 46 ft.) 5 tractor trailer (over 46 ft.) 6 tractor with twin trailers 7 logging truck 8 logging tractor trailer 9 tri-axle truck 10 panel truck/van 11 other truck 12 vehicle with trailer 13 bus 14 truck towing house trailer width: Ft. 15 ambulance 16 motorized recreational veh. 17 motorcycle, scooter, minibike 18 moped 19 bicycle 20 farm or construction equip. 21 train 22 all terrain vehicle 23 other (specify) Hazardous Material? 1 Yes 2 No

VEHICLE MANEUVER 1 turning left 2 turning right 3 making U-turn 4 stopped 5 straight 6 changing lanes 7 backing 8 parked 9 passing 10 entering/leaving parking 11 entering/leaving driveway

Insurance Co. and/or Agency [redacted] Policy No. [redacted] Vehicle removed by: [redacted] Citations NONE

VEHICLE # 1

## CONTRIBUTING FACTORS

(check one or more)

- 1 ☐ no contributing factors  
2 ☐ driver under influence  
3 ☐ surface defects  
4 ☐ mechanical or veh failure  
5 ☐ driverless vehicle  
6 ☐ driver lost control  
7 ☐ misjudged clearance  
8 ☐ improper backing  
9 ☐ changed lanes improperly  
10 ☐ parked improperly  
11 ☐ no signal/improper signal  
12 ☐ following too close  
13 ☐ exceeding speed limit  
14 ☒ too fast for conditions  
15 ☐ disregard stop sign/signal  
16 ☐ wrong side of road  
17 ☐ improper passing  
18 ☐ improper turn  
19 ☐ improper passing of stopped school bus  
20 ☐ pedestrian violation  
21 ☐ failed to yield  
22 ☐ disregard police officer  
23 ☐ weather conditions  
24 ☐ object or animal  
25 ☐ driver condition  
26 ☐ other \_\_\_\_\_

(specify)

## VISION OBSCURED BY

- 1 ☒ not obscured  
2 ☐ building  
3 ☐ blinding headlights  
4 ☐ blinding sunlight  
5 ☐ parked vehicle  
6 ☐ trees, bushes  
7 ☐ rain, snow, ice on windshield  
8 ☐ other \_\_\_\_\_

## DIRECTION OF TRAVEL

N O S E W

## VEHICLE CONDITION

- 1 ☒ no known defects  
2 ☐ tire failure  
3 ☐ brake failure  
4 ☐ improper lights  
5 ☐ steering failure  
6 ☐ slick tires  
7 ☐ other failure \_\_\_\_\_

(specify)

## SPEED LIMIT

45

## ESTIMATED SPEED

45

## TRAFFIC CONTROL

- 1 ☐ no control present  
2 ☐ traffic signal  
3 ☐ rr signal/sign  
4 ☐ warning sign  
5 ☐ stop or yield sign  
6 ☐ no passing zone  
7 ☒ lanes  
8 ☐ other \_\_\_\_\_

(specify)

## NUMBER OF LANES

2

## DEVICE INOPERATIVE

- 1 ☐ YES 2 ☒ NO

## VEHICLE CLASS

- 1 ☒ privately owned  
2 ☐ commercial  
3 ☐ police  
4 ☐ fire  
5 ☐ school  
6 ☐ other govt. owned  
7 ☐ military  
8 ☐ other \_\_\_\_\_

VEHICLE # 2

## CONTRIBUTING FACTORS

(check one or more)

- 1 ☒ no contributing factors  
2 ☐ driver under influence  
3 ☐ surface defects  
4 ☐ mechanical or veh failure  
5 ☐ driverless vehicle  
6 ☐ driver lost control  
7 ☐ misjudged clearance  
8 ☐ improper backing  
9 ☐ changed lanes improperly  
10 ☐ parked improperly  
11 ☐ no signal/improper signal  
12 ☐ following too close  
13 ☐ exceeding speed limit  
14 ☐ too fast for conditions  
15 ☐ disregard stop sign/signal  
16 ☐ wrong side of road  
17 ☐ improper passing  
18 ☐ improper turn  
19 ☐ improper passing of stopped school bus  
20 ☐ pedestrian violation  
21 ☐ failed to yield  
22 ☐ disregard police officer  
23 ☐ weather conditions  
24 ☐ object or animal  
25 ☐ driver condition  
26 ☐ other \_\_\_\_\_

(specify)

## VISION OBSCURED BY

- 1 ☒ not obscured  
2 ☐ building  
3 ☐ blinding headlights  
4 ☐ blinding sunlight  
5 ☐ parked vehicle  
6 ☐ trees, bushes  
7 ☐ rain, snow, ice on windshield  
8 ☐ other \_\_\_\_\_

## DIRECTION OF TRAVEL

N O S E W

## VEHICLE CONDITION

- 1 ☒ no known defects  
2 ☐ tire failure  
3 ☐ brake failure  
4 ☐ improper lights  
5 ☐ steering failure  
6 ☐ slick tires  
7 ☐ other failure \_\_\_\_\_

(specify)

## SPEED LIMIT

45

## ESTIMATED SPEED

40

## TRAFFIC CONTROL

- 1 ☐ no control present  
2 ☐ traffic signal  
3 ☐ rr signal/sign  
4 ☐ warning sign  
5 ☐ stop or yield sign  
6 ☐ no passing zone  
7 ☒ lanes  
8 ☐ other \_\_\_\_\_

(specify)

## NUMBER OF LANES

2

## DEVICE INOPERATIVE

- 1 ☐ YES 2 ☒ NO

## VEHICLE CLASS

- 1 ☒ privately owned  
2 ☐ commercial  
3 ☐ police  
4 ☐ fire  
5 ☐ school  
6 ☐ other govt. owned  
7 ☐ military  
8 ☐ other \_\_\_\_\_

## TYPE ACCIDENT

- 1 ☒ angle intersecting  
2 ☐ head on  
3 ☐ rear end  
4 ☐ sideswipe-same direction  
5 ☐ sideswipe-opposite direction  
6 ☐ overturned  
7 ☐ struck object  
8 ☐ pedestrian  
9 ☐ parked vehicle  
10 ☐ other non-collision

## LOCATION AT POI

- 1 ☒ on roadway  
2 ☐ on shoulder  
3 ☐ off roadway  
4 ☐ median  
5 ☐ ramp

## LIGHT CONDITION

- 1 ☒ daylight  
2 ☐ dusk  
3 ☐ dawn  
4 ☐ dark-lighted  
5 ☐ dark-not lighted

## SURFACE CONDITION

- 1 ☐ dry  
2 ☒ wet  
3 ☐ snowy/icy  
4 ☐ other \_\_\_\_\_

(specify)

## WEATHER

- 1 ☐ clear  
2 ☒ cloudy  
3 ☐ rain  
4 ☐ snow/sleet  
5 ☐ fog  
6 ☐ other \_\_\_\_\_

## OBJECT STRUCK

- 1 ☐ guard rail  
2 ☐ utility or other pole  
3 ☐ tree  
4 ☐ bridge  
5 ☐ median wall  
6 ☐ ditch/culvert

## ROAD CHARACTER

- 7 ☐ embankment  
8 ☐ highway sign  
9 ☐ construction equip/material  
10 ☐ deer  
11 ☐ other animal  
12 ☐ other \_\_\_\_\_

(specify)

## PEDESTRIAN U.I.

- ped#1 1 ☐ yes 2 ☐ no 3 ☐ link  
ped#2 1 ☐ yes 2 ☐ no 3 ☐ link  
ped#3 1 ☐ yes 2 ☐ no 3 ☐ link  
ped#4 1 ☐ yes 2 ☐ no 3 ☐ link  
ped#5 1 ☐ yes 2 ☐ no 3 ☐ link  
ped#6 1 ☐ yes 2 ☐ no 3 ☐ link

## PEDESTRIAN MANEUVER

- 1-crossing, not at crosswalk  
2-crossing at crosswalk  
3-walking w/traffic  
4-walking against traffic  
5-pushing or working on veh

## 6-other working in road

- 7-playing roadway  
8-standing in roadway  
9-off roadway  
10-other \_\_\_\_\_

(specify)

## TAKEN FROM SCENE

- 1-yes  
2-no

## SAFETY EQUIP. IN USE

- 1-seatbelt  
2-harness & seatbelt  
3-helmet  
4-child restraint (properly used)  
5-child restraint (improperly used)  
6-air bag  
7-unknown  
0-none

## ROAD CHARACTER

- 1 ☐ straight and level  
2 ☒ straight on grade  
3 ☐ straight on hillcrest

- 4 ☐ curve and level  
5 ☐ curve on grade  
6 ☐ curve on hillcrest

## ROAD COMPOSITION

- 1 ☐ concrete  
2 ☒ black top  
3 ☐ tar and gravel  
4 ☐ dirt  
5 ☐ gravel  
6 ☐ other \_\_\_\_\_

(specify)

## ROAD DEFECTS

- 1 ☐ no defects  
2 ☒ defective shoulders  
3 ☐ holes, deep ruts, bumps  
4 ☐ loose material on surface  
5 ☐ road under construction  
6 ☐ water standing  
7 ☐ polished surface  
8 ☐ other \_\_\_\_\_

## POSITION

Use "P" for pedestrians



## INJURY CODES

- 1-killed  
2-serious  
3-visible  
4-complaint

## EJECTION

- 1-not ejected  
2-trapped  
3-ejected

## DAMAGE OTHER THAN VEHICLE

## OWNER'S NAME

Injured Last Name

First

Address

City

State

Zip

DRIVER VEH. 1

DRIVER VEH. 2

Injured taken to:

Hospital  
Hospital  
Hospital

PHOTOGRAPHS TAKEN:

YES  
X NO

BY:

EMS Notified Time:

EMS Arrival Time:

EMS Hospital Arrival Time:

BEST AVAILABLE COPY

Report by:

Department:

Report Date:

Checked By:

Dated Checked:

page 1 of 2



Witness — Name \_\_\_\_\_ Address \_\_\_\_\_ Phone \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

REMARKS

Vehicle #1 was eastbound on [REDACTED] Road. Vehicle #2 was westbound on [REDACTED] Road. Driver of Vehicle #1 lost control of vehicle and spun into path of Vehicle #2. Vehicle #2 struck Vehicle #1 in the right quarter panel with the right front.

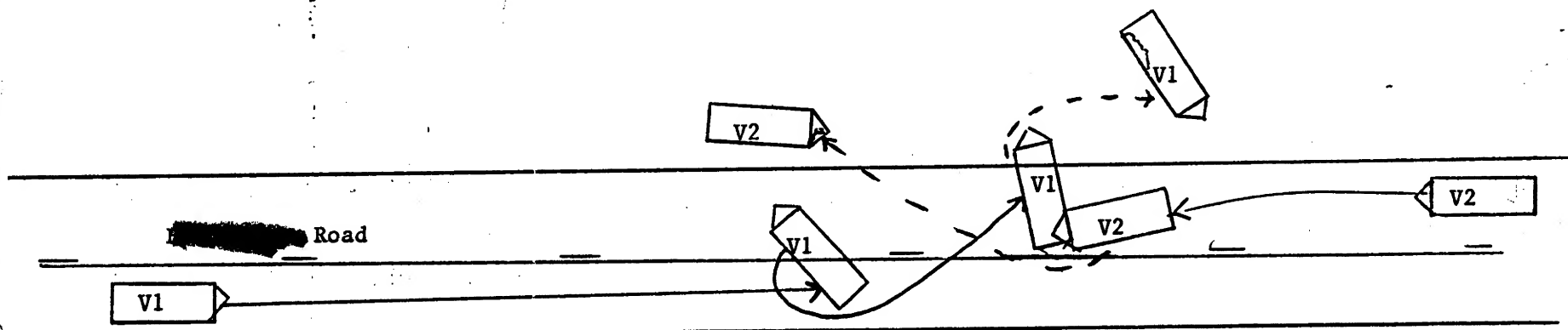
Area of impact was approximately 5 feet 2 inches from the edge of the roadway (measured to the edge of the pavement). After impact, Vehicle #1 spun clockwise and came to rest approximately 21 feet from point of impact area; Vehicle #2 rotated clockwise and came to rest approximately 48 feet from area of impact. Driver of Vehicle #1 stated that she did not remember what happened to cause her to lose control of her vehicle. Driver of Vehicle #2 stated that Vehicle #1 just suddenly began to spin out of control. Roadway was wet from recent rain at time of accident however; it was not raining at time of accident.

Report by [REDACTED]

INDICATE ON THIS DIAGRAM WHAT HAPPENED



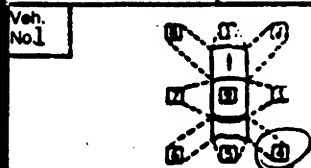
INDICATE NORTH



← 1.3 miles limits

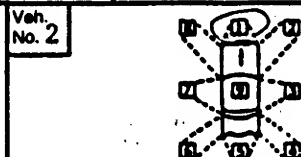
VEHICLE DAMAGE

CIRCLE POINT OF INITIAL IMPACT



☐ UNDERCARRIAGE

- DAMAGE
- 1 ☐ none
  - 2 ☐ slight
  - 3 ☐ moderate
  - 4 ☒ extensive
  - 5 ☐ fire present



☐ UNDERCARRIAGE

- DAMAGE
- 1 ☐ none
  - 2 ☐ slight
  - 3 ☐ moderate
  - 4 ☒ extensive
  - 5 ☐ fire present

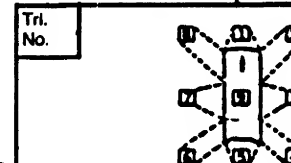
Width of Road 19ft9in shoulders 12 feet

Skid distance before impact

00	after	00
Veh. 1		Veh. 1
00		00
Veh. 2		Veh. 2

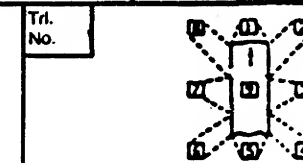
TOWED VEHICLE OR TRAILER DAMAGE

CIRCLE POINT OF INITIAL IMPACT



☐ UNDERCARRIAGE

- DAMAGE
- 1 ☐ none
  - 2 ☐ slight
  - 3 ☐ moderate
  - 4 ☐ extensive
  - 5 ☐ fire present



☐ UNDERCARRIAGE

- DAMAGE
- 1 ☐ none
  - 2 ☐ slight
  - 3 ☐ moderate
  - 4 ☐ extensive
  - 5 ☐ fire present

Appendix B  
NASS Data Collection Forms



U.S. Department of Transportation

National Highway Traffic Safety  
Administration

# ACCIDENT COLLISION DIAGRAM

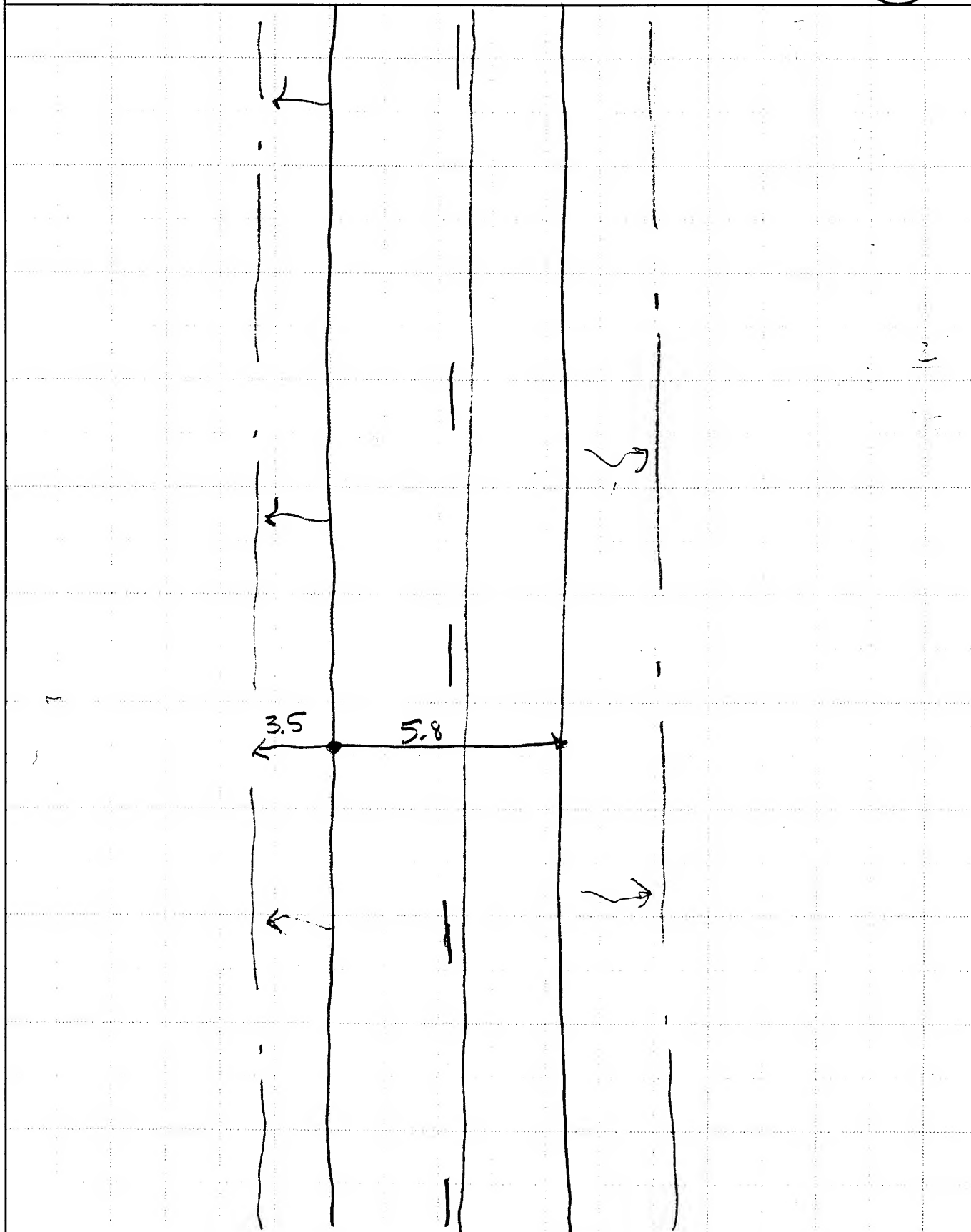
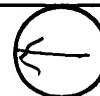
BEST AVAILABLE COPY

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

PSU No. NC 51

Case Number—Stratum 9305

Indicate  
North



## ACCIDENT COLLISION MEASUREMENT TABLE

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

Primary Sampling Unit Number NC SI

Case Number—Stratum 9305

ACCIDENT COLLISION DIAGRAM			CRASH DATA		
LEVEL I PHYSICAL EVIDENCE ABSENT	LEVEL II (Cont'd) physical evidence is present:				
<p>To be accomplished when there is no physical evidence present at the scene:</p> <ul style="list-style-type: none"> <li>* approximate vehicle orientation at impact and final rest</li> <li>* applicable road/roadway delineation (e.g., curbs/edge lines, lane markings, median markings, pavement markings, etc.)</li> <li>* applicable traffic controls (e.g., speed limit)</li> <li>* north arrow placed on diagram</li> <li>* sketch required</li> </ul>	<ul style="list-style-type: none"> <li>* document reference point and reference line relative to physical features present at the scene</li> <li>* scale documentation of all accident induced physical evidence</li> <li>* scaled documentation of all roadside objects contacted</li> <li>* roadway surface type and condition of applicable roadways</li> <li>* grade measurements for all applicable roadways and at location of rollover initiation</li> <li>* scaled representations of the vehicle(s) at pre-impact, impact, and final rest based upon either:                             <div style="margin-left: 20px;">                                 a) physical evidence, or                                  b) reconstructed accident dynamics                             </div> </li> </ul>				
		Heading Angle	VEH. #1	VEH. #2	VEH. #3
		Surface Type			
		Surface Condition			
		Grade (v/h) Measurement (between impact and final rest)			
		Grade (v/h) Measurement (at location of rollover initiation)			

Reference Point: \_\_\_\_\_ Reference line: \_\_\_\_\_

[illegible]

[illegible]

# ACCIDENT FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM**

1. Primary Sampling Unit Number <u>NCST</u>				SPECIAL STUDIES - INDICATORS			
2. Case Number - Stratum <u>9305</u>				Check (✓) each special study (SS14-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.			
IDENTIFICATION							
3. Number of General Vehicle Forms Submitted <u>02</u>				6. <u>  </u> SS14 Fatal AOPS <u>0</u>			
4. Date of Accident (Month, Day, Year) <u>      </u> / <u>9</u> / <u>8</u>				7. <u>  </u> SS15 Administrative Use <u>0</u>			
5. Time of Accident <u>1235</u>				8. <u>  </u> SS16 <u>                    </u> <u>0</u>			
Code reported military time of accident.				9. <u>  </u> SS17 <u>                    </u> <u>0</u>			
NOTE: Midnight = 2400 Unknown = 9999				10. <u>  </u> SS18 <u>                    </u> <u>0</u>			
				NUMBER OF EVENTS			
				11. Number of Recorded Events in This Accident <u>04</u>			
				Code the number of events which occurred in this accident.			
ACCIDENT EVENTS							
For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object on the right.							
Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage	
12. <u>0</u> <u>1</u>	13. <u>01</u>	14. <u>01</u>	15. <u>R</u>	16. <u>02</u>	17. <u>02</u>	18. <u>F</u>	
19. <u>0</u> <u>2</u>	20. <u>01</u>	21. <u>01</u>	22. <u>R</u>	23. <u>02</u>	24. <u>02</u>	25. <u>R</u>	
26. <u>0</u> <u>3</u>	27. <u>02</u>	28. <u>02</u>	29. <u>B</u>	30. <u>60</u>	31. <u>00</u>	32. <u>0</u>	
33. <u>0</u> <u>4</u>	34. <u>01</u>	35. <u>01</u>	36. <u>B</u>	37. <u>60</u>	38. <u>00</u>	39. <u>0</u>	
40. <u>0</u> <u>5</u>	41. <u>  </u>	42. <u>  </u>	43. <u>  </u>	44. <u>  </u>	45. <u>  </u>	46. <u>  </u>	
IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT							

## CODES FOR CLASS OF VEHICLE

- (00) Not a motor vehicle
- (01) Subcompact/mini (wheelbase < 254 cm)
- (02) Compact (wheelbase ≥ 254 but < 265 cm)
- (03) Intermediate (wheelbase ≥ 265 but < 278 cm)
- (04) Full size (wheelbase ≥ 278 but < 291 cm)
- (05) Largest (wheelbase ≥ 291 cm)
- (09) Unknown passenger car size
- (11) Compact utility vehicle
- (12) Large utility vehicle (≤ 4,500 kgs GVWR)
- (13) Passenger van (≤ 4,500 kgs GVWR)
- (14) Other van (≤ 4,500 kgs GVWR)
- (15) Pickup truck (≤ 4,500 kgs GVWR)
- (18) Other truck (≤ 4,500 kgs GVWR)
- (19) Unknown light truck type
- (20) School bus
- (21) Other bus
- (22) Truck (> 4,500 kgs GVWR)
- (23) Tractor without trailer
- (24) Tractor-trailer(s)
- (25) Motored cycle
- (28) Other vehicle
- (99) Unknown

## CODES FOR GENERAL AREA OF DAMAGE (GAD)

### CDS APPLICABLE AND OTHER VEHICLES

- (O) Not a motor vehicle
- (N) Noncollision
- (F) Front
- (R) Right side
- (L) Left side
- (B) Back
- (T) Top
- (U) Undercarriage
- (9) Unknown

### TDC APPLICABLE VEHICLES

- (O) Not a motor vehicle
- (N) Noncollision
- (F) Front
- (R) Right side
- (L) Left side
- (B) Back of unit with cargo  
area (rear of trailer or  
straight truck)
- (D) Back (rear of tractor)
- (C) Rear of cab
- (V) Front of cargo area
- (T) Top
- (U) Undercarriage
- (9) Unknown

## CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED

### (01-30) — Vehicle Number

#### Noncollision

- (31) Overturn — rollover
- (32) Fire or explosion
- (33) Jackknife
- (34) Other intraunit damage (specify):

- 
- (35) Noncollision injury
  - (38) Other noncollision (specify):

- 
- (39) Noncollision — details unknown

#### Collision With Fixed Object

- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment
- (45) Breakaway pole or post (any diameter)

#### Nonbreakaway Pole or Post

- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in  
diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)  
(specify):

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify):

- 
- (69) Unknown fixed object

#### Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
- (72) Pedestrian
- (73) Cyclist or cycle
- (74) Other nonmotorist or conveyance

- 
- (75) Vehicle occupant
  - (76) Animal
  - (77) Train
  - (78) Trailer, disconnected in transport
  - (88) Other nonfixed object (specify):

- 
- (89) Unknown nonfixed object

- (98) Other event (specify):

- 
- (99) Unknown event or object





## GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

NCSE

2. Case Number - Stratum

9305

3. Vehicle Number

01

## VEHICLE IDENTIFICATION

4. Vehicle Model Year

91

Code the last two digits of the model year  
(99) Unknown

5. Vehicle Make (specify):

MERCURY

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

6. Vehicle Model (specify):

CPR

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

8. Vehicle Identification Number

6MPCT0123M

Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros  
Unknown—Code all nine's

## OFFICIAL RECORDS

9. Police Reported Vehicle Disposition

(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

10. Police Reported Travel Speed

999

Code to the nearest kph (NOTE: 000 means  
less than 0.5 kph)  
(160) 159.5 kph and above  
(999) Unknown

\_\_\_ mph X 1.6093 = \_\_\_ kph

11. Police Reported Alcohol Presence

(0) No alcohol present  
(1) Yes (alcohol present)  
(7) Not reported  
(8) No driver present  
(9) UnknownNote: See variables 37 through 55  
(Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver

Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

Source:

PAR

## ACCIDENT RELATED

13. Speed Limit

(000) No statutory limit  
Code posted or statutory speed limit  
in kph  
(999) Unknown

45 mph X 1.6093 = 724 kph

14. Attempted Avoidance Maneuver

(00) No impact  
(01) No avoidance actions  
(02) Braking (no lockup)  
(03) Braking (lockup)  
(04) Braking (lockup unknown)  
(05) Releasing brakes  
(06) Steering left  
(07) Steering right  
(08) Braking and steering left  
(09) Braking and steering right  
(10) Accelerating  
(11) Accelerating and steering left  
(12) Accelerating and steering right  
(97) No driver present  
(98) Other action (specify):

(99) Unknown

15. Accident Type

Applicable codes may be found on the  
back of page two of this field form  
(00) No impact  
Code the number of the diagram that  
best describes the accident circumstance  
(98) Other accident type (specify):

(99) Unknown

\*\*\*\* SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 \*\*\*\*

# CODES FOR BODY TYPE

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
  - (02) 2-door sedan, hardtop, coupe
  - (03) 3-door/2-door hatchback
  - (04) 4-door sedan, hardtop
  - (05) 5-door/4-door hatchback
  - (06) Station wagon (excluding van and truck based)
  - (07) Hatchback, number of doors unknown
  - (08) Other automobile type (specify):
- 
- (09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,500$ kgs GVWR)

- (20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Vanagon/Camper.)
  - (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
  - (22) Step van or walk-in van ( $\leq 4,500$  kgs GVWR)
  - (23) Van based motorhome ( $\leq 4,500$  kgs GVWR)
  - (24) Van based school bus ( $\leq 4,500$  kgs GVWR)
  - (25) Van based other bus ( $\leq 4,500$  kgs GVWR)
  - (28) Other van type (Hi-Cube Van, Kary) (specify):
- 
- (29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
  - (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- 
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,500$ kgs GVWR)

- (60) Step van ( $> 4,500$  kgs GVWR)
- (61) Single unit straight truck ( $4,500$  kgs  $<$  GVWR  $\leq 8,850$  kgs)
- (62) Single unit straight truck ( $8,850$  kgs  $<$  GVWR  $\leq 12,000$  kgs)
- (63) Single unit straight truck ( $> 12,000$  kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
  - (81) Moped (motorized bicycle)
  - (82) Three-wheel motorcycle or moped
  - (88) Other motored cycle (minibike, motorscooter) (specify):
- 
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## OCCUPANT RELATED

16. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
17. Number of Occupants This Vehicle 01  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
18. Number of Occupant Forms Submitted 01

## VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 1082 0  
 Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_
20. Vehicle Cargo Weight 000 0  
 Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs

## RECONSTRUCTION DATA

21. Towed Trailing Unit 0  
 (0) No towed unit  
 (1) Yes—towed trailing unit  
 (9) Unknown
22. Documentation of Trajectory Data for This Vehicle 0  
 (0) No  
 (1) Yes
23. Post Collision Condition of Tree or Pole (For Highest Delta V) 0  
 (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted <45 degrees  
 (4) Tilted ≥45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

24. Rollover 0  
 (0) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (1) Rollover, 1 quarter turn only  
 (2) Rollover, 2 quarter turns  
 (3) Rollover, 3 quarter turns  
 (4) Rollover, 4 or more quarter turns (specify): \_\_\_\_\_  
 (5) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (9) Rollover (overturn), details unknown

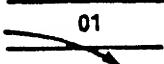


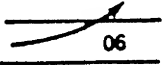
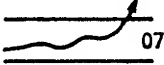
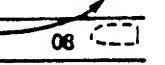
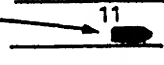

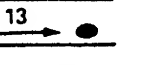
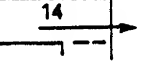
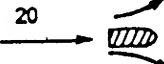
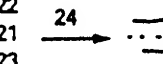
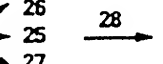
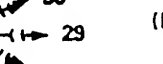
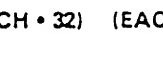



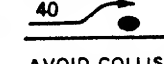
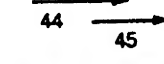
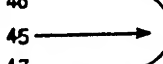


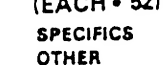



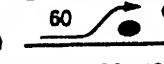

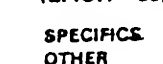

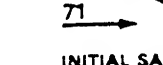
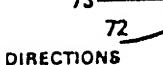
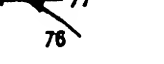

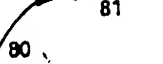

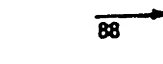
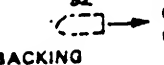

## OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) 0
26. Rear Override/Underride (this Vehicle) 0  
 (0) No override/underride, or not an end-to-end impact  
*Override (see specific CDC)*  
 (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify): \_\_\_\_\_  
*Underride (see specific CDC)*  
 (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify): \_\_\_\_\_  
 (7) Medium/heavy truck or bus override  
 (9) Unknown

## HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown

27. Heading Angle For This Vehicle 999
28. Heading Angle For Other Vehicle 999

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I Single Driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C. Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER 16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 24, 25, 26, 27	 26 DECEL. 28, 29, 30, 31	 30 SPECIFICS OTHER	 31 SPECIFICS UNKNOWN
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH • 32) (EACH • 33) SPECIFICS OTHER SPECIFICS UNKNOWN
	F. Sideswipe Angle	 44 LATERAL MOVE	 45 LATERAL MOVE	 46 LATERAL MOVE	(EACH • 42) (EACH • 43) SPECIFICS OTHER SPECIFICS UNKNOWN	(EACH • 48) (EACH • 49) SPECIFICS OTHER SPECIFICS UNKNOWN
III Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	 51 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN	
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH • 62) (EACH • 63) SPECIFICS OTHER SPECIFICS UNKNOWN
	I. Sideswipe Angle	 64 LATERAL MOVE	 65 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN	
IV Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTIONS	 73 INITIAL SAME DIRECTIONS	(EACH • 74) (EACH • 75) SPECIFICS OTHER SPECIFICS UNKNOWN	
	K. Turn Into Path	 77 TURN INTO SAME DIRECTION	 79 TURN INTO SAME DIRECTION	 81 TURN INTO OPPOSITE DIRECTIONS	(EACH • 84) (EACH • 85) SPECIFICS OTHER SPECIFICS UNKNOWN	
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	 86 STRAIGHT PATHS	 88 STRAIGHT PATHS	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN	
VI Miscellaneou	M. Backing Etc.	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	98 Other Accident Type 99 Unknown Accident Type 00 No Impact		

<p>29. Basis for Total Delta V (highest) <span style="float: right;"><u>1</u></span></p> <p><i>Delta V Calculated</i></p> <p>(1) CRASH program—damage only routine</p> <p>(2) CRASH program—damage and trajectory routine</p> <p>(3) Missing vehicle algorithm</p> <p><i>Delta V Not Calculated</i></p> <p>(4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.</p> <p>(5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.</p> <p>(6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.</p>	<p style="text-align: right;">Secondary      Highest</p> <p>32. Lateral Component of Delta V <span style="float: right;"><u>0012</u></span></p> <p style="text-align: right;"><u>-12</u> Nearest kph</p> <p>(NOTE: <u>000</u> means greater than -0.5 kph and less than +0.5 kph) (<math>\pm 160</math>) <math>\pm 159.5</math> kph and above (<u>999</u>) Unknown</p> <p>33. Energy Absorption <span style="float: right;"><u>010500</u></span></p> <p style="text-align: right;"><u>10471</u> Nearest 100 joules</p> <p>(NOTE: 0000 means less than 50 joules) (9997) 999,650 joules or more (9999) Unknown</p> <p>34. Confidence In Reconstruction Program Results (For Highest Delta V) <span style="float: right;"><u>1</u></span></p> <p>(0) No reconstruction</p> <p>(1) Collision fits model — results appear reasonable</p> <p>(2) Collision fits model — results appear high</p> <p>(3) Collision fits model — results appear low</p> <p>(4) Borderline reconstruction — results appear reasonable</p> <p>35. Type of Vehicle Inspection <span style="float: right;"><u>1</u></span></p> <p>(0) No inspection</p> <p>(1) Complete inspection</p> <p>(2) Partial inspection (specify): _____</p> <p>36. Is this an AOPS Vehicle? <span style="float: right;"><u>1</u></span></p> <p>(0) No</p> <p>(1) Yes - researcher determined</p> <p>(2) VIN determined air bag system</p> <p>(3) VIN determined automatic (passive) belts</p> <p>(4) VIN determined air bag and automatic (passive) belts</p>
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COMPUTER GENERATED DELTA V

<p style="text-align: right;">Secondary      Highest</p> <p>30. Total Delta V <span style="float: right;"><u>024</u></span></p> <p style="text-align: right;"><u>24</u> Nearest kph</p> <p>(NOTE: 000 means less than 0.5 kph) (160) 159.5 kph and above (999) Unknown</p> <p>31. Longitudinal Component of Delta V <span style="float: right;"><u>0021</u></span></p> <p style="text-align: right;"><u>-21</u> Nearest kph</p> <p>(NOTE: <u>000</u> means greater than -0.5 kph and less than +0.5 kph) (<math>\pm 160</math>) <math>\pm 159.5</math> kph and above (<u>999</u>) Unknown</p>	<p>35. Type of Vehicle Inspection <span style="float: right;"><u>1</u></span></p> <p>(0) No inspection</p> <p>(1) Complete inspection</p> <p>(2) Partial inspection (specify): _____</p> <p>36. Is this an AOPS Vehicle? <span style="float: right;"><u>1</u></span></p> <p>(0) No</p> <p>(1) Yes - researcher determined</p> <p>(2) VIN determined air bag system</p> <p>(3) VIN determined automatic (passive) belts</p> <p>(4) VIN determined air bag and automatic (passive) belts</p>
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IS OLDMISS APPLICABLE FOR THIS VEHICLE? [ ] YES [✓] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

37. Police Reported Other Drug Presence ☒

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Drug Evaluation Classification (DEC) Test For Driver ☒

- (0) No DEC process available or given
- (1) DEC process given, results known
- (2) DEC process given, results unknown
- (3) DEC process available, unknown if given
- (8) No driver present

39. Other Drug Specimen Test Type For Driver ☒

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify):
- (7) Unspecified specimen test
- (8) No driver present
- (9) Unknown if specimen test given

**DRUG EVALUATION CLASSIFICATION  
OTHER DRUGS TEST RESULTS FOR DRIVER**

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. <input checked="" type="radio"/>	41. <input checked="" type="radio"/>
Depressant Drug	42. <input checked="" type="radio"/>	43. <input checked="" type="radio"/>
Stimulant Drug	44. <input checked="" type="radio"/>	45. <input checked="" type="radio"/>
Hallucinogen Drug	46. <input checked="" type="radio"/>	47. <input checked="" type="radio"/>
Cannabinoid Drug	48. <input checked="" type="radio"/>	49. <input checked="" type="radio"/>
Phencyclidine (PCP)	50. <input checked="" type="radio"/>	51. <input checked="" type="radio"/>
Inhalant Drug	52. <input checked="" type="radio"/>	53. <input checked="" type="radio"/>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <input checked="" type="radio"/>	55. <input checked="" type="radio"/>

## Codes For DEC Test Results

- (0) No DEC test given
- (1) Passed DEC test
- (2) Failed DEC test
- (3) DEC test given—results unknown
- (8) No driver present
- (9) Unknown if DEC test given

## Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or not obtained
- (8) No driver present
- (9) Unknown if specimen test given

**OTHER DATA**

## 56. Driver's Zip Code

- (00000) Driver not present  
 (00001) Driver not a resident of U.S. or territories  
 Code actual 5-digit zip code  
 (99999) Unknown

## 57. Driver's Race/Ethnic Origin

- (0) Driver not present  
 (1) White (non-Hispanic)  
 (2) Black (non-Hispanic)  
 (3) White (Hispanic)  
 (4) Black (Hispanic)  
 (5) American Indian, Eskimo or Aleut  
 (6) Asian or Pacific Islander  
 (8) Other (specify):  
 (9) Unknown

## 58. Vehicle Special Use (This Trip)

- (0) No special use  
 (1) Taxi  
 (2) Vehicle used as school bus  
 (3) Vehicle used as other bus  
 (4) Military  
 (5) Police  
 (6) Ambulance  
 (7) Fire truck or car  
 (8) Other (specify):  
 (9) Unknown

## 61. Rollover Initiation Object Contacted

## 62. Location on Vehicle Where Initial Principal Tripping Force Is Applied

- (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify):  
 (8) Non-contact rollover forces (specify):  
 (9) Unknown

## 63. Direction of Initial Roll

- (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (5) End-over-end (i.e., primarily about the lateral axis)  
 (9) Unknown roll direction

**PRECRASH DATA**

## 64. Pre-Event Movement (Prior to Recognition of Critical Event)

- (01) Going straight  
 (02) Slowing or stopping in traffic lane  
 (03) Starting in traffic lane  
 (04) Stopped in traffic lane  
 (05) Passing or overtaking another vehicle  
 (06) Disabled or parked in travel lane  
 (07) Leaving a parking position  
 (08) Entering a parking position  
 (09) Turning right  
 (10) Turning left  
 (11) Making a U-turn  
 (12) Backing up (other than for parking position)  
 (13) Negotiating a curve  
 (14) Changing lanes  
 (15) Merging  
 (16) Successful avoidance maneuver to a previous critical event  
 (97) Other (specify):  
 (98) No driver present  
 (99) Unknown

**ROLLOVER DATA**

If GV07 (Body Type)  $\neq$  1-49, leave GV59-GV63 blank.  
 If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.  
 If GV24 = 9, then GV59-GV63 must equal 9.

## 59. Rollover Initiation Type

- (0) No rollover  
 (1) Trip-over  
 (2) Flip-over  
 (3) Turn-over  
 (4) Climb-over  
 (5) Fall-over  
 (6) Bounce-over  
 (7) Collision with another vehicle  
 (8) Other rollover initiation type (specify):  
 (9) Unknown rollover initiation type

## 60. Location of Rollover Initiation

- (0) No rollover  
 (1) On roadway  
 (2) On shoulder—paved  
 (3) On shoulder—unpaved  
 (4) On roadside or divided trafficway median  
 (9) Unknown

## CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

### Noncollision

- (31) Turn-over — fall-over
- (33) Jackknife

### Collision With Fixed Object

- (41) Tree ( $\leq 10$  cm in diameter)
- (42) Tree ( $> 10$  cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

### Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 10$  cm in diameter)
- (51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)
- (52) Pole or post ( $> 30$  cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)  
(specify): \_\_\_\_\_

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): \_\_\_\_\_

- (69) Unknown fixed object

### Collision with Nonfixed Object

- (71) Motor vehicle not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (88) Other nonfixed object (specify): \_\_\_\_\_

- (89) Unknown nonfixed object

- (98) Other event (specify): \_\_\_\_\_

- (99) Unknown event or object



## PRECRASH DATA (Continued)

65. Critical Precrash Event 10*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): \_\_\_\_\_
- (09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

*Pedestrian or Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): \_\_\_\_\_
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): \_\_\_\_\_
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location
- (98) Other critical precrash event (specify): \_\_\_\_\_
- (99) Unknown

For Corrective Actions Attempted see variable GV14  
(Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver 9

- (0) No avoidance maneuver
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): \_\_\_\_\_
- (8) No driver present
- (9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action) 9

- (0) No avoidance maneuver
- (1) Vehicle stayed in travel lane where avoidance maneuver was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
- (4) Vehicle departed roadway
- (5) Avoidance maneuver initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), \*\*\*  
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*  
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

## EXTERIOR VEHICLE FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM**

1. Primary Sampling Unit Number <u>NCSE</u> 2. Case Number - Stratum <u>93</u> <u>05</u>	3. Vehicle Number <u>01</u>
---	-----------------------------

## VEHICLE IDENTIFICATION

VIN 6MPCT01Z3M [REDACTED] Model Year 91  
 Vehicle Make (specify): MERCURY Vehicle Model (specify): CAPRI

## LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
1	STARTS 85 CM BEHIND FRT AXLE	STARTS 45 CM BACK OF FRT AX
2	STARTS 34 CM FRT OF FRT AX	STARTS 34 CM FRT OF FRT AXLE
3	STARTS @ LRCNR	ENTIRE REAR PLANE

### CRUSH PROFILE IN CENTIMETERS

**NOTES:** Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

**Measure and document on the vehicle diagram the location of maximum crush.**

**Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.**

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

**Use as many lines/columns as necessary to describe each damage profile.**

[illegible]

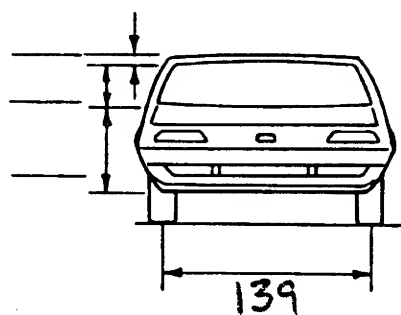
# ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	<u>94.7</u>	inches	x 2.54	=	<u>241</u>	cm
Overall Length	<u>166.1</u>	inches	x 2.54	=	<u>422</u>	cm
Maximum Width	<u>64.6</u>	inches	x 2.54	=	<u>164</u>	cm
Curb Weight	<u>2,385</u> <sup>44</sup>	pounds	x .4536	=	<u>1,082</u>	kg
Average Track	<u>54.9</u> <u>56.0</u>	inches	x 2.54	=	<u>139</u> <u>142</u>	cm
Front Overhang	___	inches	x 2.54	=	___	cm
Rear Overhang	___	inches	x 2.54	=	___	cm
Undeformed End Width	___	inches	x 2.54	=	___	cm
Engine Size: cyl./displ.	___	cc	x .001	=	___	L
	___	CID	x .0164	=	___	L

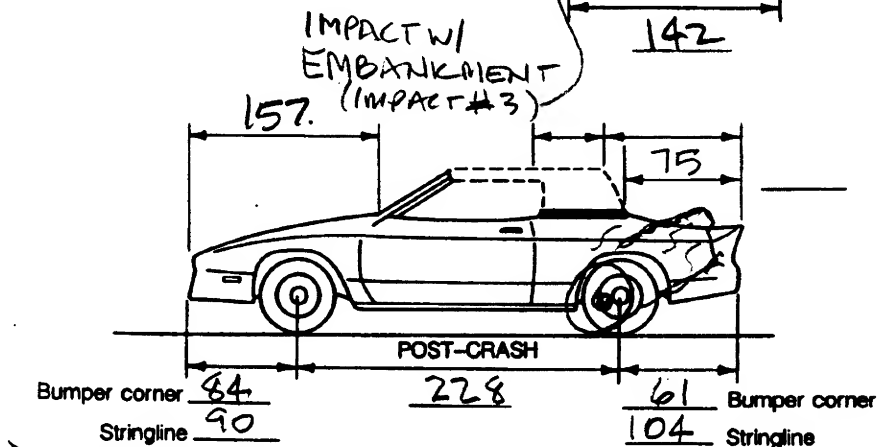
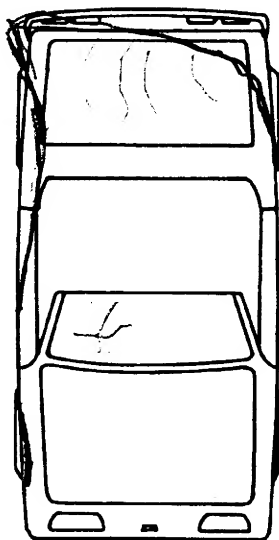
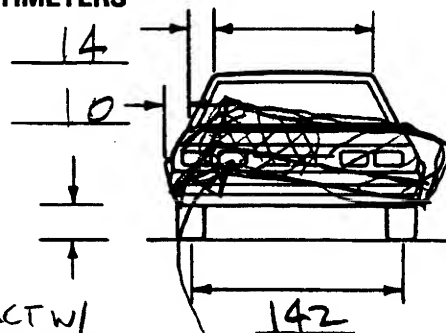
## VEHICLE DAMAGE SKETCH

<b>TIRE—WHEEL DAMAGE</b> a. Rotation physically restricted RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>1</u> (1) Yes (2) No (8) NA (9) Unk.		b. Tire deflated RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u>		<b>ORIGINAL SPECIFICATIONS</b> Wheelbase <u>241</u> cm Overall Length <u>422</u> cm Maximum Width <u>164</u> cm Curb Weight <u>1,082</u> kg Average Track <u>140.5</u> cm Front Overhang <u>90</u> cm Rear Overhang <u>91</u> cm Undeformed End Width <u>152</u> cm Engine Size: cyl./displ. <u>4/1.6</u> L		<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF ± _____ ° LF ± _____ ° RR <u>⊖ 10</u> ° LR ± _____ ° Within ± 5 degrees	
<b>TYPE OF TRANSMISSION</b> <input checked="" type="checkbox"/> Manual <input type="checkbox"/> Automatic				<b>DRIVE WHEELS</b> <input type="checkbox"/> FWD <input checked="" type="checkbox"/> RWD <input type="checkbox"/> 4WD		Approximate Cargo Weight <u>0</u> kg	

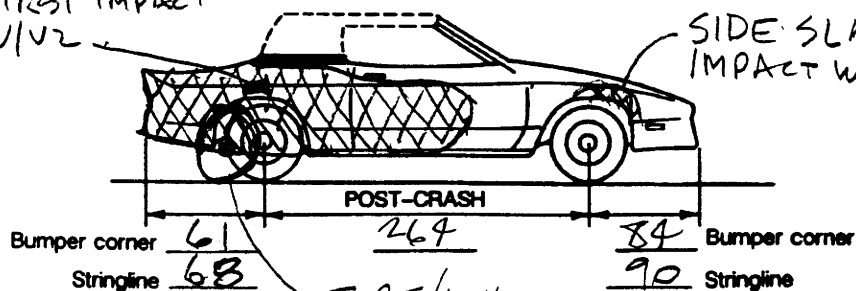
## MEASUREMENTS IN CENTIMETERS



Original  
Bumper height



DEPLOYMENT IMPACT -  
FIRST IMPACT  
W/V2



TIRE/WHEEL  
DISPLACED  
REARWARD

NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

## CDC WORKSHEET

## CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

## Noncollision

(31) Overturn — rollover

(32) Fire or explosion

(33) Jackknife

(34) Other intraunit damage (specify):

(35) Noncollision injury

(38) Other noncollision (specify):

(39) Noncollision — details unknown

## Collision With Fixed Object

(41) Tree ( $\leq 10$  cm in diameter)(42) Tree ( $> 10$  cm in diameter)

(43) Shrubbery or bush

(44) Embankment

(45) Breakaway pole or post (any diameter)

## Nonbreakaway Pole or Post

(50) Pole or post ( $\leq 10$  cm in diameter)(51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)(52) Pole or post ( $> 30$  cm in diameter)

(53) Pole or post (diameter unknown)

(54) Concrete traffic barrier

(55) Impact attenuator

(56) Other traffic barrier (includes guardrail) (specify):

(57) Fence

(58) Wall

(59) Building

(60) Ditch or culvert

(61) Ground

(62) Fire hydrant

(63) Curb

(64) Bridge

(68) Other fixed object (specify):

(69) Unknown fixed object

## Collision with Nonfixed Object

(71) Motor vehicle not in-transport

(72) Pedestrian

(73) Cyclist or cycle

(74) Other nonmotorist or conveyance

(75) Vehicle occupant

(76) Animal

(77) Train

(78) Trailer, disconnected in transport

(88) Other nonfixed object (specify):

(89) Unknown nonfixed object

(98) Other event (specify):

(99) Unknown event or object

## DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	030	00	R	Z	E	W	02
02	02	010	00	R	F	E	S	01
04	60	210	20	B	Y	E	W	03
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—

## COLLISION DEFORMATION CLASSIFICATION

## HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>01</u>	7. <u>R</u>	8. <u>Z</u>	9. <u>E</u>	10. <u>W</u>	11. <u>02</u>

## Second Highest Delta "V"

12. <u>03</u>	13. <u>60</u>	14. <u>07</u>	15. <u>B</u>	16. <u>Y</u>	17. <u>E</u>	18. <u>W</u>	19. <u>03</u>
---------------	---------------	---------------	--------------	--------------	--------------	--------------	---------------

## CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

## HIGHEST DELTA "V"

20. L	21. C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	22. ±D
<u>220</u>	<u>000</u>	<u>011</u>	<u>013</u>	<u>018</u>	<u>006</u>	<u>000</u>	<u>0065</u>

## Second Highest Delta "V"

23. L	24. C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>	25. ±D
<u>152</u>	<u>036</u>	<u>030</u>	<u>022</u>	<u>016</u>	<u>009</u>	<u>000</u>	<u>0037</u>

26. Are CDCs Documented but Not Coded on The Automated File?  
(0) No  
(1) Yes

1

27. Researcher's Assessment of Vehicle Disposition  
(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

1

28. Original Wheelbase  
Code to the nearest centimeter  
(999) Unknown

241

\_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

29. Is This A Multi-Stage Manufactured Vehicle  
And/Or A Certified Altered Vehicle?

- (0) No post manufacturer modifications  
(1) Yes - post manufacturer modifications  
(specify): \_\_\_\_\_

\_\_\_\_\_  
(Include photograph of CERTIFICATION  
PLACARD in case report)

- (9) Unknown if vehicle is modified

30. Fire Occurrence

- (0) No fire

Yes, fire occurred

- (1) Minor  
(2) Major  
(9) Unknown

31. Origin of Fire

- (0) No fire  
(1) Vehicle exterior (front, side, back, top)  
(2) Exhaust system  
(3) Fuel tank (and other fuel retention  
system parts)  
(4) Engine compartment  
(5) Cargo/trunk compartment  
(6) Instrument panel  
(7) Passenger compartment area  
(8) Other location (specify): \_\_\_\_\_

- (9) Unknown

32. Type of Fuel Tank

- (0) No fuel tank (electrical vehicle)  
(1) Metallic  
(2) Non-metallic  
(9) Unknown

\*\*\* STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS \*\*\*  
(I.E., GV09 = 0 OR 9 AND GV36 = 0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



## INTERIOR VEHICLE FORM

1. Primary Sampling Unit Number NCSE2. Case Number - Stratum 93053. Vehicle Number 01

## INTEGRITY

4. Passenger Compartment Integrity 06

(00) No integrity loss

Yes, Integrity Was Lost Through

- (01) Windshield  
(02) Door (side)  
(03) Door/hatch (back door)  
(04) Roof  
(05) Roof glass  
(06) Side window  
(07) Rear window (backlight)  
(08) Roof and roof glass  
(09) Windshield and door (side)  
(10) Windshield and roof  
(11) Side and rear window (side window and backlight)  
(12) Windshield and side window  
(13) Door and side window  
(98) Other combination of above (specify):  
\_\_\_\_\_  
(99) Unknown

## Door, Tailgate or Hatch Opening

5. LF 1 6. RF 3 7. LR 0 8. RR 0 9. TG/H 0

- (0) No door/gate/hatch  
(1) Door/gate/hatch remained closed and operational  
(2) Door/gate/hatch came open during collision  
(3) Door/gate/hatch jammed shut  
(8) Other (specify):  
\_\_\_\_\_  
(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch  
Opening in Collision. If IV05-IV09  $\neq$  2, Then code 010. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

- (0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

- (1) Door operational (no damage)  
(2) Latch/striker failure due to damage  
(3) Hinge failure due to damage  
(4) Door structure failure due to damage  
(5) Door support (i.e., pillar, sill, roof side rail,  
etc.) failure due to damage  
(6) Latch/striker and hinge failure due to damage  
(8) Other failure (specify):  
\_\_\_\_\_  
(9) Unknown

## GLAZING

## Glazing Damage from Impact Forces

15. WS 0 16. LF 0 17. RF 6 18. LR 0 19. RR 0  
20. BL 8 21. Roof 8 22. Other 6

- (0) No glazing damage from impact forces  
(2) Glazing in place and cracked from impact forces  
(3) Glazing in place and holed from impact forces  
(4) Glazing out-of-place (cracked or not) and not holed from  
impact forces  
(5) Glazing out-of-place and holed from impact forces  
(6) Glazing disintegrated from impact forces  
(7) Glazing removed prior to accident  
(8) No glazing  
(9) Unknown if damaged

## Glazing Damage from Occupant Contact

23. WS 2 24. LF 0 25. RF 9 26. LR 0 27. RR 0  
28. BL 0 29. Roof 0 30. Other 9

- (0) No occupant contact to glazing or no glazing  
(1) Glazing contacted by occupant but no glazing damage  
(2) Glazing in place and cracked by occupant contact  
(3) Glazing in place and holed by occupant contact  
(4) Glazing out-of-place (cracked or not) by occupant  
contact and not holed by occupant contact  
(5) Glazing out-of-place by occupant contact and holed by  
occupant contact  
(6) Glazing disintegrated by occupant contact  
(9) Unknown if contacted by occupant

If No Glazing Damage *And* No Occupant Contact or No  
Glazing, Then Code IV31 Through IV46 As 0

## Type of Window/Windshield Glazing

31. WS 1 32. LF 0 33. RF 2 34. LR 0 35. RR 0  
36. BL 0 37. Roof 0 38. Other 2

- (0) No glazing contact and no damage, or no glazing  
(1) AS-1 - Laminated  
(2) AS-2 - Tempered  
(3) AS-3 - Tempered-tinted  
(4) AS-14 - Glass/Plastic  
(8) Other (specify):  
\_\_\_\_\_  
(9) Unknown

## Window Precrash Glazing Status

39. WS 1 40. LF 0 41. RF 2 42. LR 0 43. RR 0  
44. BL 0 45. Roof 0 46. Other 1

- (0) No glazing contact and no damage, or no glazing  
(1) Fixed  
(2) Closed  
(3) Partially opened  
(4) Fully opened  
(9) Unknown



## OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. _____	48. _____	49. _____	50. _____
2nd	51. _____	52. _____	53. _____	54. _____
3rd	55. _____	56. _____	57. _____	58. _____
4th	59. _____	60. _____	61. _____	62. _____
5th	63. _____	64. _____	65. _____	66. _____
6th	67. _____	68. _____	69. _____	70. _____
7th	71. _____	72. _____	73. _____	74. _____
8th	75. _____	76. _____	77. _____	78. _____
9th	79. _____	80. _____	81. _____	82. _____
10th	83. _____	84. _____	85. _____	86. _____

## LOCATION OF INTRUSION

Front Seat  
 (11) Left  
 (12) Middle  
 (13) Right

Second Seat  
 (21) Left  
 (22) Middle  
 (23) Right

Third Seat  
 (31) Left  
 (32) Middle  
 (33) Right

Fourth Seat  
 (41) Left  
 (42) Middle  
 (43) Right

(97) Catastrophic  
 (98) Other enclosed area (specify) \_\_\_\_\_

(99) Unknown

## INTRUDING COMPONENT

*Interior Components*

- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A (A1/A2)-pillar
- (07) B-pillar
- (08) C-pillar
- (09) D-pillar
- (10) Door panel (side)
- (12) Roof (or convertible top)
- (13) Roof side rail
- (14) Windshield
- (15) Windshield header
- (16) Window frame
- (17) Floor pan (includes sill)
- (18) Backlight header
- (19) Front seat back
- (20) Second seat back
- (21) Third seat back
- (22) Fourth seat back
- (23) Fifth seat back
- (24) Seat cushion
- (25) Back door/panel (e.g., tailgate)
- (26) Other interior component (specify): \_\_\_\_\_

- (27) Side panel - forward of the A (A2)-pillar
- (28) Side panel - rear of the A (A2)-pillar

*Exterior Components*

- (30) Hood
- (31) Outside surface of this vehicle (specify): \_\_\_\_\_
- (32) Other exterior object in the environment (specify): \_\_\_\_\_
- (33) Unknown exterior object
- (97) Catastrophic
- (98) Intrusion of unlisted component(s) (specify): \_\_\_\_\_
- (99) Unknown

## MAGNITUDE OF INTRUSION

- (1)  $\geq 3$  centimeters but  $< 8$  centimeters
- (2)  $\geq 8$  centimeters but  $< 15$  centimeters
- (3)  $\geq 15$  centimeters but  $< 30$  centimeters
- (4)  $\geq 30$  centimeters but  $< 46$  centimeters
- (5)  $\geq 46$  centimeters but  $< 61$  centimeters
- (6)  $\geq 61$  centimeters
- (7) Catastrophic
- (9) Unknown

## DOMINANT CRUSH DIRECTION

- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (7) Catastrophic
- (9) Unknown

## STEERING COLUMN

## 87. Steering Column Type

- (1) Fixed column  
 (2) Tilt column  
 (3) Telescoping column  
 (4) Tilt and telescoping column  
 (8) Other column type (specify):  
 (9) Unknown

1

## 88. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

X X

## 89. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

X X X

## 90. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

X X X

## 91. Blank

(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

X X X

## 92. Steering Rim/Spoke Deformation

- Code actual measured deformation to the nearest centimeter  
 (00) No steering rim deformation  
 (01-14) Actual measured value in centimeters  
 (15) 15 centimeters or more  
 (98) Observed deformation cannot be measured  
 (99) Unknown

00

## 93. Location of Steering Rim/Spoke Deformation

(00) No steering rim deformation

00

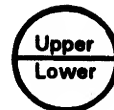
## Quarter Sections

- (01) Section A  
 (02) Section B  
 (03) Section C  
 (04) Section D



## Half Sections

- (05) Upper half of rim/spoke  
 (06) Lower half of rim/spoke  
 (07) Left half of rim/spoke  
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse  
 (10) Undetermined location  
 (99) Unknown

## INSTRUMENT PANEL

## 94. Odometer Reading

031,000

- 30968 kilometers—Code to the nearest 1,000 kilometers  
 (000) No odometer  
 (001) Less than 1,500 kilometers  
 (500) 499,500 kilometers or more  
 (999) Unknown

19243 miles X 1.6093 = 30968 kilometersSource: [REDACTED]

## 95. Instrument Panel Damage from Occupant Contact?

- (0) No  
 (1) Yes  
 (9) Unknown

1

## 96. Knee Bolsters Deformed from Occupant Contact?

- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

0

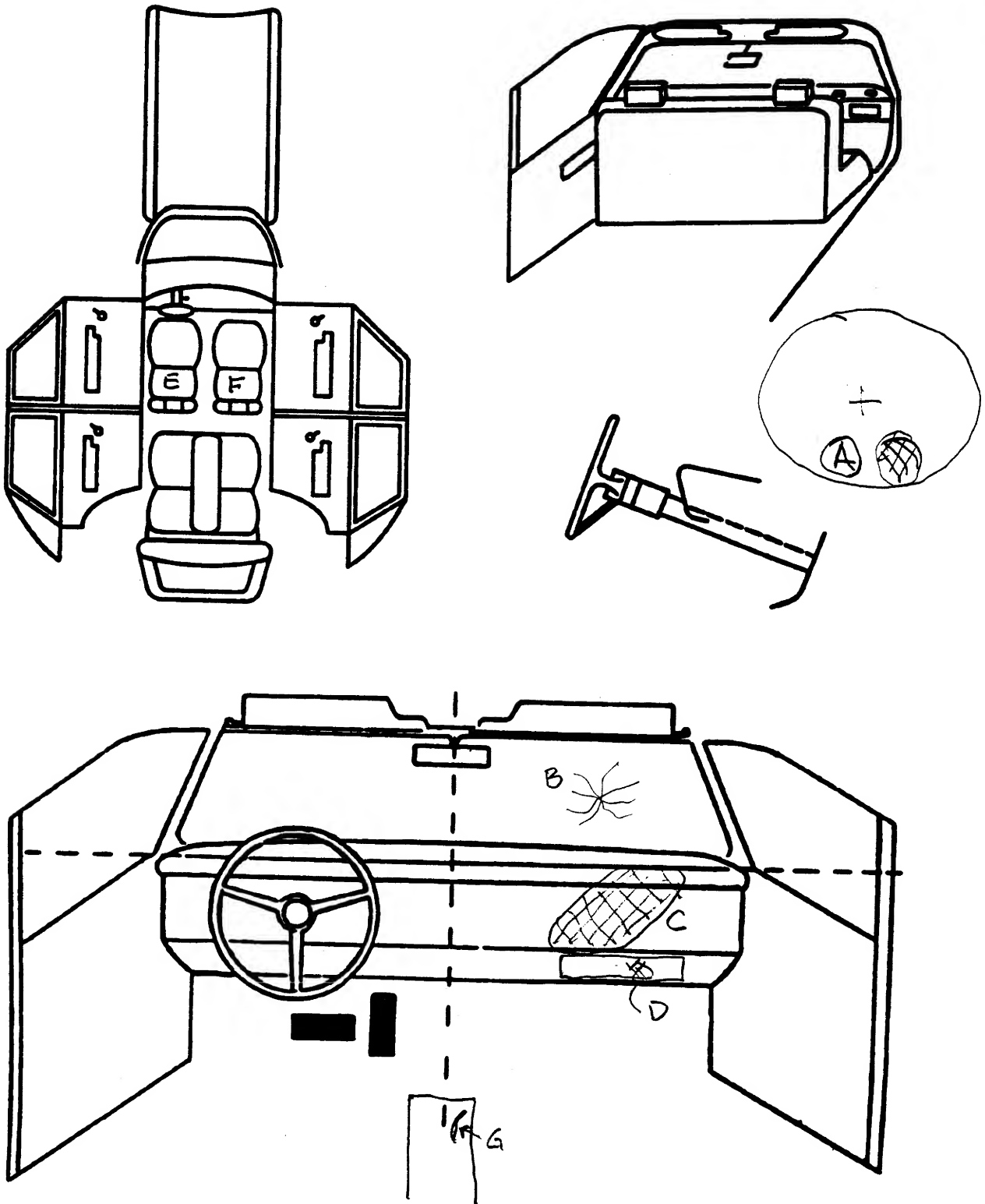
## 97. Did Glove Compartment Door Open During Collision(s)?

- (0) No  
 (1) Yes  
 (8) Not present  
 (9) Unknown

9

## VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).  
 Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.  
 Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

## POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	45	1	F	POSSIBLE MAKEUP SMUDGES	2
B	01	1	H	SPIDERWEB CRACKS	1
C	11	1	U	DEFORMATION & TRANSFERS	1
D	12	1	U	TRANSFER	1
E	40	1	U	LEANED BACK	2
F	40	UNK	U	LEANED BACK	2
G	57	UNK	U	CONSOLE PLASTIC CRACK	2
H					
I					
J					
K					
L					
M					
N					

## CODES FOR INTERIOR COMPONENTS

## FRONT

- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify): \_\_\_\_\_
- (19) Other front object (specify): \_\_\_\_\_

## LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar

- (23) Left B-pillar

- (24) Other left pillar (specify): \_\_\_\_\_

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.

- (27) Other left side object (specify): \_\_\_\_\_

- (28) Left side window sill

## RIGHT SIDE

- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify): \_\_\_\_\_

- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B pillar, or roof side rail.

- (37) Other right side object (specify): \_\_\_\_\_

- (38) Right side window sill

## INTERIOR

- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify): \_\_\_\_\_
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)

- (46) Other occupants (specify): \_\_\_\_\_

- (47) Interior loose objects

- (48) Child safety seat (specify): \_\_\_\_\_

- (49) Other interior object (specify): \_\_\_\_\_

## ROOF

- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

## FLOOR

- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

## REAR

- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify): \_\_\_\_\_

## CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

## AUTOMATIC RESTRAINTS

**NOTES:** Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

### AIR BAGS

		Left	Right
FIRST	Availability/Function	1	0
	Deployment	1	0
	Failure	1	0

#### Air Bag System Availability/Function

- (0) Not equipped/not available  
(1) Air bag

#### Non-functional

- (2) Air bag disconnected (specify):  
\_\_\_\_\_  
(3) Air bag not reinstalled  
(9) Unknown

#### Air Bag System Deployment

- (0) Not equipped/not available  
(1) Air bag deployed during accident (as a result of impact)  
(2) Air bag deployed inadvertently just prior to accident  
(3) Air bag deployed, accident sequence undetermined  
(4) Nondeployed  
(5) Unknown if deployed  
(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
(9) Unknown

#### Did Air Bag System Fail?

- (0) Not equipped/not available  
(1) No  
(2) Yes (specify):  
\_\_\_\_\_  
(9) Unknown

### AUTOMATIC BELTS

		Left	Right
FIRST	Availability/Function	/	/
	Use	/	/
	Type	/	/
	Proper Use	/	/
	Failure Modes	/	/

#### Automatic (Passive) Belt System Availability/Function

- (0) Not equipped/not available  
(1) 2 point automatic belts  
(2) 3 point automatic belts  
(3) Automatic belts - type unknown

#### Non-functional

- (4) Automatic belts destroyed or rendered inoperative  
(9) Unknown

#### Automatic (Passive) Belt System Use

- (0) Not equipped/not available/destroyed or rendered inoperative  
(1) Automatic belt in use  
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)  
(3) Automatic belt use unknown  
(9) Unknown

#### Automatic (Passive) Belt System Type

- (0) Not equipped/not available  
(1) Non-motorized system  
(2) Motorized system  
(9) Unknown

#### Proper Use of Automatic (Passive) Belt System

- (0) Not equipped/not available/not used  
(1) Automatic belt used properly  
(2) Automatic belt used properly with child safety seat

#### Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm  
(4) Automatic shoulder belt worn behind back  
(5) Automatic belt worn around more than one person  
(6) Lap portion of automatic belt worn on abdomen  
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):  
\_\_\_\_\_  
(8) Other improper use of automatic belt system (specify):  
\_\_\_\_\_  
(9) Unknown

#### Automatic (Passive) Belt Failure Modes During Accident

- (0) Not equipped/not available/not in use  
(1) No automatic belt failure(s)  
(2) Torn webbing (stretched webbing not included)  
(3) Broken buckle or latchplate  
(4) Upper anchorage separated  
(5) Other anchorage separated (specify):  
\_\_\_\_\_  
(6) Broken retractor  
(7) Combination of above (specify):  
\_\_\_\_\_  
(8) Other automatic belt failure (specify):  
\_\_\_\_\_  
(9) Unknown

## MANUAL RESTRAINTS

**NOTES:** Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	0	4
	Use	04	00	04
	Failure Modes	1	0	1
SECOND	Availability	4	0	4
	Use	04	00	00
	Failure Modes	1	0	0
THIRD	Availability			
	Use			
	Failure Modes			
OTHER	Availability			
	Use			
	Failure Modes			

**Manual (Active) Belt System Availability**

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

**Integral Belt Partially Destroyed**

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown

**Manual (Active) Belt System Use**

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): \_\_\_\_\_
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown

(08) Other belt used (specify): \_\_\_\_\_

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat - type unknown
- (18) Other belt used with child safety seat (specify): \_\_\_\_\_
- (99) Unknown if belt used

**Manual (Active) Belt Failure Modes During Accident**

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_
- (6) Broken retractor
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other manual belt failure (specify): \_\_\_\_\_
- (9) Unknown

## CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

### 1. Type of Child Safety Seat

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

### 2. Child Safety Seat Orientation

- (00) No child safety seat

Designed for Rear Facing for This Age/Weight

- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):

- (09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

- (19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

- (29) Unknown orientation

- (99) Unknown if child safety seat used

### 3. Child Safety Seat Harness Usage

### 4. Child Safety Seat Shield Usage

### 5. Child Safety Seat Tether Usage

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

### 6. Child Safety Seat Make/Model

(Specify make/model and occupant number)

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## HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3	0	3
	Seat Type	02	00	02
	Seat Performance	3	0	5
	Seat Orientation	1	0	1
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	03	00	03
	Seat Performance	1	0	6
	Seat Orientation	1	0	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			

## Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other Specify: \_\_\_\_\_

(9) Unknown

## Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_

- (10) Box mounted seat (i.e., van type)
- (99) Unknown

## Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed specify: \_\_\_\_\_
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_

(7) Combination of above (specify): P-SIDE PANEL

(8) Other (specify): \_\_\_\_\_

(9) Unknown

## Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): \_\_\_\_\_

(9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)



**EJECTION/ENTRAPMENT DATA**

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

**EJECTION** No [ ☒ ] Yes [ ☐ ]

Describe indications of ejection and body parts involved in partial ejection(s):

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Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

**Ejection**

- (1) Complete ejection
- (1) Partial ejection
- (3) Ejection, Unknown degree
- (9) Unknown

**Ejection Area**

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

**(7) Roof**

- (8) Other area (e.g., back of pickup, etc.) (specify):

(9) Unknown

**Ejection Medium**

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify):

**(5) Integral structure**

- (8) Other medium (specify):

(9) Unknown

**Medium Status (Immediately Prior to Impact)**

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

**ENTRAPMENT** No [ ☒ ] Yes [ ☐ ]

Describe entrapment mechanism: \_\_\_\_\_

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Component(s): \_\_\_\_\_

(Note in vehicle interior diagram)



## INTERVIEW FORM (A)

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number NCSI

Interviewee(s) Role or Name(s): DRIVER

2. Case Number - Stratum 9305

3. Vehicle Number 01

Review all available information and interview questions prior to conducting interview(s) to ensure the acquisition of all pertinent data.

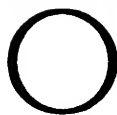
If the driver was not the person interviewed, was an appointment made for a follow-up interview?

### DRIVER'S DESCRIPTION OF ACCIDENT EVENTS

I WAS DRIVING ALONG ~~ROAD~~ ROAD WHEN MY AIRBAG SUDDENLY & UNEXPECTEDLY INFLATED. MY VEHICLE DID NOT STRIKE ANYTHING PRIOR TO THE INFLATION OF THE AIRBAG. AFTER THE AIRBAG INFLATED, I APPLIED MY BRAKES & STOPPED THE VEHICLE IN THE ROAD. AFTER MY VEHICLE WAS STOPPED, I WAS ATTEMPTING TO CRAWL FROM BETWEEN THE INFLATED AIRBAG & THE DRIVER'S SEATBACK, AND AS I WAS MOVING FROM THE DRIVER'S SEAT TO THE RIGHT FRONT SEAT, THE GRAND AM STRUCK MY VEHICLE. THE IMPACT RESULTED IN MY STRIKING THE RIGHT SIDE DASH & WINDSHIELD. MY AIRBAG REMAINED TIGHTLY INFLATED AFTER IT WENT OFF & THIS WAS THE REASON I COULDN'T GET OUT THE DRIVER'S DOOR & WAS TRYING TO GET OUT THE RIGHT DOOR WHEN I WAS HIT.

### OCCUPANT'S DESCRIPTION OF ACCIDENT EVENTS

## ACCIDENT DIAGRAM



NORTH

The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

**INTERVIEW FORM (B)**

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number NC

Interviewee(s) Role or Name(s): DRIVER

2. Case Number - Stratum 9305

3. Vehicle Number 01

**ACCIDENT DATA QUESTIONS**

1. Can you tell me in which direction you were traveling?

☐ North ☐ South ☐ East ☐ West

(Optional - Where were you coming from or going to?)

NOT SURE - GOING AWAY  
FROM TOWN

2. In which lane were you traveling?

(Note: Lane 1 is designated as the right curb lane.)

☒ (1) ☐ (2) ☐ (3) ☐ (4) ☐ Other (specify): \_\_\_\_\_

3. Can you remember your estimated travel speed (in miles per hour) before the accident?

☐ Stopped ☐ 1-10 ☐ 10-20  
☐ 20-30 ☒ 30-40 ☐ 40-50  
☐ 50-60 ☐ 60-70 ☐ 70+

4. Just before the accident, can you tell me what you were intending to do or were doing?

☒ Going straight ☐ Stopped  
☐ slowing ☐ Accelerating  
☐ Turning left ☐ Turning right  
☐ Changing lanes to left ☐ Changing lanes to right  
☐ Backing  
☐ Other (specify): \_\_\_\_\_

5. Did you experience any loss of control due to weather conditions or mechanical problems?

☐ No

☒ Yes (If yes, describe below)

AIRBAG DEPLOYED WITHOUT  
ANY IMPACT

6. Did you have to take any avoidance actions prior to the accident?

☒ No - Go to question 7  
☐ Yes - Go to question 6a

6a. What actions did you take?

☐ Braking with lock-up  
☐ Braking without lock-up  
☐ Releasing brakes  
☐ Accelerating  
☐ Steering left  
☐ Steering right  
☐ Other (specify): \_\_\_\_\_

7. Where was your vehicle at the time of the collision?

☐ Original travel lane ☐ Different travel lane  
☐ In intersection ☐ Off roadway to right  
☐ Off roadway to left  
☐ Other (specify): \_\_\_\_\_

8. Was your travel speed at the time of the collision different from your previous travel speed?

☐ No  
☐ Lower  
☐ higher  
☐ Unknown

8a. Can you estimate your speed at the time of the collision?

☐ Stopped ☐ 1-10 ☐ 10-20  
☐ 20-30 ☐ 30-40 ☐ 40-50  
☐ 50-60 ☐ 60-70 ☐ 70+

9. Immediately following the collision, can you describe how your vehicle moved to its stopped position?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Can you tell me how many collisions your vehicle had during the accident and the source of the collisions?

\_\_\_\_\_  
\_\_\_\_\_

1. Primary Sampling Unit Number

NCSE

3. Vehicle Number

01

2. Case Number - Stratum

9305

4. Occupant Number

01

## VEHICLE/DRIVER DATA QUESTIONS

1. Can you tell me the year, make, model of your vehicle?

1 9 \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
 Year Make Model

2. Can you describe the damage to your vehicle?

\_\_\_\_\_  
 \_\_\_\_\_

3. Was there any previous damage to your vehicle that is not related to this accident?

☐ No  
☐ Yes (If "yes", describe below)

\_\_\_\_\_  
 \_\_\_\_\_

4. Did any of the doors (hatch, tailgate) open during the accident?

☒ No  
☐ Yes (If "Yes", describe below)

\_\_\_\_\_  
 \_\_\_\_\_

5. Did any of the windows break during the accident?

☐ No  
☒ Yes (If "Yes", describe below)

w/s  
 \_\_\_\_\_  
 \_\_\_\_\_

6. Does your vehicle have a glove compartment?

☐ No  
☒ Yes

6a. Did the glove compartment door come open during the accident?

☐ No  
☐ Yes  
☒ Unknown

7. Does your vehicle have "seat belts"?

☐ No (If "No", go to question 7b)  
☒ Yes (If "Yes", go to question 7a)

7a. Can you describe the type of seat belt for each seat?

Driver's seat	<input type="checkbox"/> Lap	<input checked="" type="checkbox"/> Lap and shoulder
Front seat middle	<input type="checkbox"/> Lap	<input checked="" type="checkbox"/> Lap and shoulder
Front seat right	<input type="checkbox"/> Lap	<input checked="" type="checkbox"/> Lap and shoulder
Rear seat left	<input type="checkbox"/> Lap	<input type="checkbox"/> Lap and shoulder
Rear seat middle	<input type="checkbox"/> Lap	<input type="checkbox"/> Lap and shoulder
Rear seat right	<input type="checkbox"/> Lap	<input type="checkbox"/> Lap and shoulder

(Identify seat belts for third row and beyond)

\_\_\_\_\_  
 \_\_\_\_\_

7b. Were any of the belts removed or not functional prior to the accident?

☒ No  
☐ Yes (If "Yes", specify which belt and describe problem)

\_\_\_\_\_  
 \_\_\_\_\_

8. Do any of the front belts move along a motorized track when the door is opened or closed?

☒ No (If "No", go to question 9)  
☐ Yes (If "Yes", what seat location?)  
☐ Left Front  
☐ Right Front

8a. Were the motorized belts working properly before the accident?

☐ No (If "No", describe condition below)

\_\_\_\_\_  
 \_\_\_\_\_

☐ Yes

8b. Were the belts connected to the track prior to the accident?

☐ No  
☐ Yes  
☐ Unknown

9. Do any of the front "seat" belts attach to the door such that when the door is opened the belt travels with the door?

☒ No (go to question 10)  
☐ Yes

9a. Does this belt come across the \_\_\_\_\_?

☐ Chest only  
☐ Lap and chest

9b. Was this belt connected prior to the accident?

☐ No  
☐ Yes  
☐ Unknown

## AIR BAGS

10. Is your vehicle equipped with a driver's side air bag?

☐ No (go to question 11)  
☒ Yes (go to question 10a)  
☐ Unknown (go to question 11)

10a. Did the air bag inflate during the accident?

☒ No (go to questions 10b and 10c)  
☐ Yes (go to question 10e)

PRIOR TO ACCIDENT

1. Primary Sampling Unit Number

NCSE

3. Vehicle Number

01

2. Case Number - Stratum

9305

4. Occupant Number

01

## VEHICLE/DRIVER DATA QUESTIONS (CONTINUED)

10b. Was the air bag wiring disconnected prior to the accident?

☒ No☐ Yes (If "Yes", describe previous condition)☐ Unknown

10c. Was your vehicle involved in any accidents prior to this accident which inflated the air bag?

☒ No (go to question 11)☐ Yes (go to question 10d)☐ Unknown

10d. Was the air bag re-installed after the accident?

☒ No (go to question 11)☐ Yes☐ Unknown

10e. Did the air bag inflate as you expected?

☒ No (If "No" describe below)☐ Yes PRIOR TO ACCIDENT, & REMAINED INFLATED☐ Unknown

11. Is your vehicle equipped with a passenger side air bag?

☒ No (If "No", go to question 12)☐ Yes (If "Yes", go to question 11a)☐ Unknown (If "Unknown", go to question 12)

11a. Did the passenger air bag inflate during the accident?

☐ No (go to question 11b)☐ Yes (go to question 12)

11b. Was the passenger air bag wiring disconnected prior to the accident?

☐ No☐ Yes (If "Yes", describe below)☐ Unknown

11c. Was the passenger air bag inflated in a previous accident?

☐ No (go to question 12)☐ Yes (go to question 11d)☐ Unknown

11d. Was the passenger air bag re-installed after the accident?

☐ No (go to question 12)☐ Yes☐ Unknown

11e. Did the passenger air bag inflate as you expected?

☐ No (If "No" describe below)☐ Yes☐ Unknown

## CHILD SAFETY SEAT

12. Was there a person in a child safety seat in your vehicle?

☒ No (If "No", go to question 13)☐ Yes☐ Unknown

12a. Can you tell me the manufacturer and model of the child safety seat?

12b. Can you describe the type of child safety seat?

☐ Infant☐ Toddler☐ Convertible☐ Booster☐ Other (specify): \_\_\_\_\_☐ Unknown

12c. Where was the child safety seat(s) located?

☐ [12] ☐ [13]☐ [21] ☐ [22] ☐ [23]☐ [31] ☐ [32] ☐ [33]☐ [Other] (specify): \_\_\_\_\_

12d. Can you tell me which direction the child safety seat was facing prior to the accident?

☐ Rear facing☐ Forward facing,☐ Other (specify): \_\_\_\_\_☐ Unknown

12e. Was a seat belt used to hold the child seat in place?

☐ No (If "No", go to question 12g)☐ Yes (If "Yes", go to question 12f)☐ Unknown

12f. Can you describe how the seat belt was secured to the child seat?

☐ Looped through designated rear framing struts?☐ Looped through arm rest slots?☐ Belt across safety shield?☐ Looped through rear frame outside the designated framing struts?☐ Other (specify): \_\_\_\_\_☐ Unknown

12g. What was the child safety seat equipped with at the time of purchase? (check all that apply)

☐ Harness☐ Shield☐ Tether strap

If any box is checked, ask questions 12h - 12i.

1. Primary Sampling Unit Number NCSI 3. Vehicle Number 01  
2. Case Number - Stratum 9305 4. Occupant Number 01

**VEHICLE/DRIVER DATA QUESTIONS (CONTINUED)**

12h. Were any of these items added after you owned the child safety seat?

- ☐ Yes  
(specify \_\_\_\_\_)  
☐ No  
☐ Unknown

12i. Were any of these items used during the accident?

- ☐ Yes (If "Yes", check all that apply)  
( ) Harness  
( ) Shield  
( ) Tether strap  
☐ No  
☐ Unknown

**OPTIONAL**

If you do not know where the vehicle is or if the owner's permission is needed for inspection.

15. Do you know where the vehicle is currently located?

\_\_\_\_\_

16. May I take a look at your vehicle to assess the damage?

- ☐ No  
☐ Yes

**CARGO WEIGHT AND MILEAGE**

13. Was there any cargo in your vehicle?

- ☒ No (If "No", go to question 14)  
☐ Yes (If "Yes", go to question 13a)  
☐ Unknown

13a. Can you estimate the weight of the cargo?

\_\_\_\_\_ lbs.

Cargo description

\_\_\_\_\_

14. Can you tell me the mileage on the vehicle?

\_\_\_\_\_ miles

**DRIVER ONLY**

17. What race do you consider yourself?

- ☒ White  
☐ Black  
☐ American Indian, Eskimo or Aleut, Asian or Pacific Islander  
☐ Other (specify: \_\_\_\_\_)  
☐ Unknown.

18. Are you of hispanic origin?

- ☒ No  
☐ Yes

1. Primary Sampling Unit Number NCSE 3. Vehicle Number 01  
 2. Case Number - Stratum 9305 4. Occupant Number 01

## OCCUPANT DATA QUESTIONS

1. Was there anyone else in your vehicle at the time of the accident?

- ☒ No (If "No", go to question 4)  
☐ Yes (If "Yes", specify number in question 2 below and then go to question 3)  
☐ Unknown

2. How many?

- (1) One other person  
 (2) Two other persons  
 (3) Three other persons  
 (4) Four other persons  
 (5) Five other persons  
 (6) Six other persons  
 (7) Seven or more other persons  
 (specify number:)

3. Where was this person sitting? (Circle seating positions)

- |      |      |      |
|------|------|------|
|      | [12] | [13] |
| [21] | [22] | [23] |
| [31] | [32] | [33] |
- ☐ Other (specify:)

## OCCUPANT CHARACTERISTICS

4. Can I have your (his/her) height, weight, age, and sex?

Height \_\_\_\_\_ Weight \_\_\_\_\_ Age \_\_\_\_\_

Sex: ☐ Male ☒ Female

## OCCUPANT POSTURE

5. Can you tell me how you (he/she was) were sitting in your vehicle?

SEE PAGE ONE

5a. Can you describe the location of your (his/her) feet just prior to the collision?

5b. Can you describe the location of your (his/her) arms?

5c. Was your (his/her) back resting against the seat back rest?

- ☐ No (If "No", describe the position)  
☐ Yes  
☐ Unknown

5d. Were you (Was he/she)

- ☐ Sitting upright or  
☐ Leaning to left side, or  
☐ Leaning to right side?

## OCCUPANT EJECTION

6. Were you (Was he/she) or any part of your (his/her) body thrown from the vehicle during the accident?

- ☒ No (If "No", go to question 7)  
☐ Yes (If "Yes", go to question 6a)  
☐ Unknown

6a. Can you remember what part of the vehicle you were (he/she was) thrown out?

- ☐ No  
☐ Yes (Describe:)

## OCCUPANT RESTRAINT

7. Were you (Was he/she) wearing a seat belt just before the accident?

- ☐ No (If "No", go to question 8)  
☒ Yes NOT AT TIME OF IMPACT W/2  
☐ Unknown

7a. Were you (Was he/she) wearing the

- ☐ Lap belt?  
☒ Lap and Shoulder belt?  
☐ Shoulder belt?

7b. Can you describe how you were (he/she was) wearing the lap belt?

- ☐ Across the stomach  
☒ Low on lap  
☐ Other (specify:)  
☐ Unknown

7c. Can you describe how you were (he/she was) wearing the shoulder belt?

- ☒ Over the shoulder  
☐ Under the arm  
☐ Behind the back  
☐ Behind the seat  
☐ Other (specify:)

7d. Did any part of the belt system break or tear?

- ☒ No  
☐ Yes (If "Yes", describe)  
☐ Unknown

## OCCUPANT ENTRAPMENT

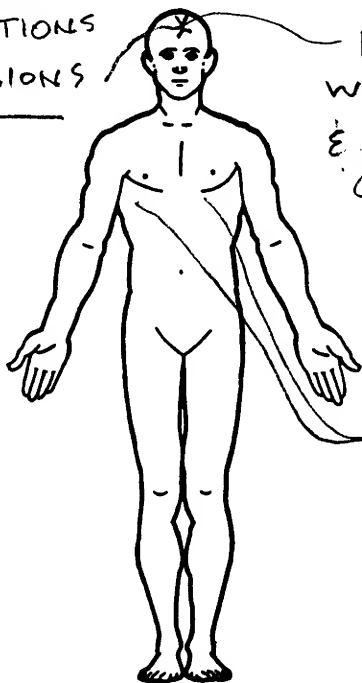
8. Were you (Was he/she) trapped in the vehicle?

- ☒ No  
☐ Yes (If "Yes", describe)  
☐ Unknown

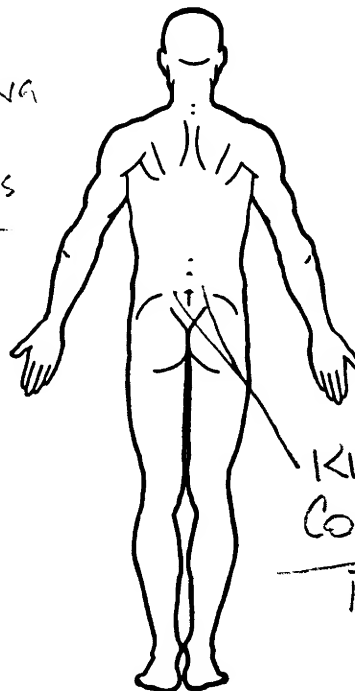


PSU Number NCST Case Number—Stratum 9305 Vehicle Number 01 Occupant Number 01

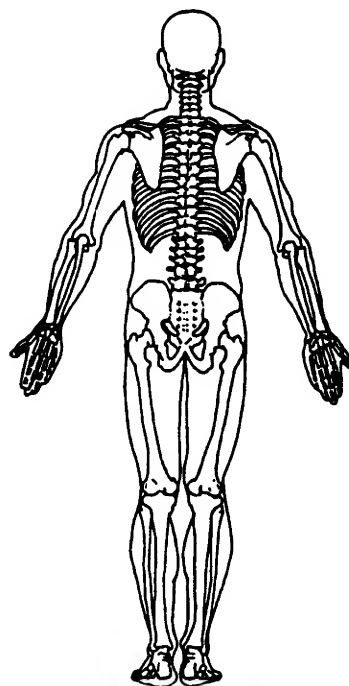
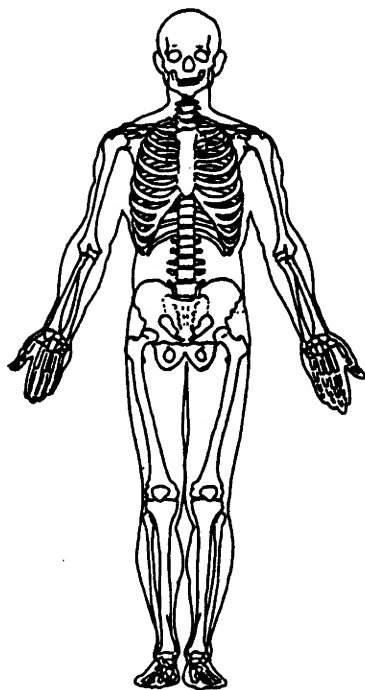
## INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): DRIVERFOREHEAD  
LACERATIONS  
& ABRASIONSWS

## SOFT TISSUE/INTERNAL INJURIES

HEAD INJURY  
w/ BRAIN SWELLING  
& LOSS OF  
CONSCIOUSNESSW/SLUNG  
CONTUSIONS  
DASHKIDNEY  
CONTUSIONS  
DASH

## SKELETAL INJURIES



The space provided on the back of this page may be used to document injuries noted by the interviewee(s).

1. Primary Sampling Unit Number

NCST

3. Vehicle Number

01

2. Case Number - Stratum

9305

4. Occupant Number

01

## OCCUPANT INJURY DATA QUESTIONS

1. Were you (Was he/she) injured?

- ☐ No (If "No", go to next occupant. Stop if no other occupant.)  
☒ Yes (If "Yes", complete Occupant Injury Questions)  
☐ Unknown

2. Did you (he/she) receive any cuts, abrasions, or bruises?

- ☐ No (go to question 3)  
☒ Yes (If "Yes", record the exact location(s) and size on the manikin(s).)  
☐ Unknown

2a. Do you know what caused your (his/her) injury(s)?

- ☐ No  
☒ Yes (If "Yes", specify the component(s) or object(s) on the manikin(s).)  
☐ Unknown

3. Did you (he/she) experience any broken bones?

- ☒ No (If "No", go to question 4)  
☐ Yes (If "Yes", record the exact location(s) and type of fracture(s) on the manikin(s), and then go to question 3a.)  
☐ Unknown

3a. Do you know what caused the injury(s)?

- ☐ No  
☐ Yes (If "Yes", specify the component(s) or object(s) on the manikin(s).)  
☐ Unknown

4. Did you (he/she) injure your (his/her) head?

- ☐ No (If "No", go to question 5)  
☒ Yes (If "Yes", describe the type of injury(s) on the manikin(s), then go to question 4a.)  
☐ Unknown

4a. Do you know what caused the injury(s)?

- ☐ No  
☒ Yes (If "Yes", specify the component(s) on the manikin(s).)  
☐ Unknown

5. Were any of your (his/her) internal organs injured?

- ☐ No (If "No", go to question 6)  
☒ Yes (If "Yes", thoroughly describe the type of injury(s) and specify the internal organ(s) injured on the manikin(s), and then go to question 5a.)  
☐ Unknown

5a. Do you know what caused this injury?

- ☐ No  
☒ Yes (If "Yes", specify the component(s) on the manikin(s).)  
☐ Unknown

6. Did you (he/she) suffer any joint sprains or muscle strains?

- ☒ No (If "No", go to question 7)  
☐ Yes (If "Yes", specify on the manikin(s), and then go to question 6a.)  
☐ Unknown

6a. Do you know what caused the injury(s)?

- ☐ No  
☐ Yes (If "Yes", specify the component(s) on the manikin(s).)  
☐ Unknown

7. Did you (he/she) receive treatment for your (his/her) injury(s)?

- ☐ No (If "No", go to question 8)  
☒ Yes (If "Yes", go to question 7a)

7a. Were you (Was he/she) treated by:

- ☒ Hospital/trauma center? (specify hospital name):  
☐ Medical clinic  
☐ Out patient surgery? (specify medical facility):  
☐ Paramedics or first aid at the scene?  
☐ A doctor in his/her office?  
☐ Treated at home?  
☐ None of the above, go to question 8.

7b. Were you (Was he/she) treated and released from the emergency room?

- ☒ No (If "No", go to question 7c.)  
☐ Yes (If "Yes", go to question 7e.)

7c. Were you (Was he/she) hospitalized?

- ☐ No (If "No", give an explanation)  
☒ Yes (If "Yes", go to question 7d.)

6 DAYS

7d. How many days were you (was he/she) in the hospital?

6 days

1. Primary Sampling Unit Number	<u>NC SI</u>	3. Vehicle Number	<u>01</u>
2. Case Number - Stratum	<u>9305</u>	4. Occupant Number	<u>01</u>

## OCCUPANT INJURY DATA QUESTIONS (CONTINUED)

7e. Have you (Has he/she) received any follow-up treatment?

☐ No

☒ Yes (If "Yes", describe:)

THERAPY

☐ Unknown

7f. In order to achieve the best possible scientific data regarding your (his/her) injury(s), we need to obtain a copy of your (his/her) medical reports. Would you (he/she) sign a medical release form?

☐ No

☐ Yes (If "Yes", mail or present the form for signature.)

8. Have you (he/she) lost any days from work or school (college)?

☐ No

☒ Yes (If "Yes", determine the number of days lost)

(Specify:) LOST JOB DUE TO

☐ Not working prior to the accident ACCIDENT

☐ Unknown



# OCCUPANT ASSESSMENT FORM

## OCCUPANT'S SEATING

1. Primary Sampling Unit Number

NCST

2. Case Number - Stratum

9305

3. Vehicle Number

01

4. Occupant Number

01

## OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

25

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

2

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height

159

Code actual height to the nearest  
centimeter.

(999) Unknown

62 1/2 inches X 2.54 = 159 centimeters

8. Occupant's Weight

048

Code actual weight to the nearest  
kilogram.

(999) Unknown

105 pounds X .4536 = 48 kilograms

9. Occupant's Role

1

(1) Driver

(2) Passenger

(9) Unknown

10. Occupant's Seat Position

11

*Front Seat*

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

*Second Seat*

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

*Third Seat*

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

*Fourth Seat*

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

8

(0) Normal posture

*Abnormal posture*

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another  
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front  
of seat

(8) Other abnormal posture (specify):

CRAWLING FROM DRIVER'S

(9) Unknown SEAT TO RIGHT

FRONT SEAT

## EJECTION/ENTRAPMENT

## 12. Ejection

0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

## 13. Ejection Area

0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)  
(specify): \_\_\_\_\_
- (9) Unknown

## 14. Ejection Medium

0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): \_\_\_\_\_
- (5) Integral structure
- (8) Other medium (specify): \_\_\_\_\_
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

(NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)

- (0) Not entrapped
- (1) Entrapped
- (9) Unknown

## RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

*Integral Belt Partially Destroyed*

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

18. Manual (Active) Belt System Use 00

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): \_\_\_\_\_

(02) Shoulder belt \_\_\_\_\_

(03) Lap belt \_\_\_\_\_

(04) Lap and shoulder belt \_\_\_\_\_

(05) Belt used—type unknown \_\_\_\_\_

(08) Other belt used (specify): \_\_\_\_\_

(12) Shoulder belt used with child safety seat \_\_\_\_\_

(13) Lap belt used with child safety seat \_\_\_\_\_

(14) Lap and shoulder belt used with child safety seat \_\_\_\_\_

(15) Belt used with child safety seat—type unknown \_\_\_\_\_

(18) Other belt used with child safety seat (specify): \_\_\_\_\_

(99) Unknown if belt used \_\_\_\_\_

19. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

*Belt Used Improperly*

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_

(8) Other improper use of manual belt system (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

20. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): \_\_\_\_\_

(6) Broken retractor \_\_\_\_\_

(7) Combination of above (specify): \_\_\_\_\_

(8) Other manual belt failure (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

21. Air Bag System Availability/Function 1

- (0) Not equipped/not available
- (1) Air bag

*Non-functional*

(2) Air bag disconnected (specify): \_\_\_\_\_

(3) Air bag not reinstalled \_\_\_\_\_

(9) Unknown \_\_\_\_\_

22. Air Bag System Deployment 1

- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

23. Are There Indications of Air Bag System Failure? 1

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): \_\_\_\_\_

(9) Unknown \_\_\_\_\_

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 0

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): \_\_\_\_\_

(8) Restrained, type unknown \_\_\_\_\_

(9) Police indicated "unknown" \_\_\_\_\_

## HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant at This Occupant Position 3

- (0) No head restraints
- (1) Integral—no damage
- (2) Integral—damaged during accident
- (3) Adjustable—no damage
- (4) Adjustable—damaged during accident
- (5) Add-on—no damage
- (6) Add-on—damaged during accident
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

26. Seat Type (this Occupant Position) 02

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): \_\_\_\_\_
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

27. Seat Performance (this Occupant Position) 3

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed
- (4) Seat track/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): \_\_\_\_\_
- (7) Combination of above (specify): \_\_\_\_\_
- (8) Other (specify): \_\_\_\_\_
- (9) Unknown

## CHILD SAFETY SEAT

28. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS

Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

29. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

30. Child Safety Seat Orientation 00

(00) No child safety seat

*Designed for Rear Facing for This Age/Weight*

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

*Designed For Forward Facing for This Age/Weight*

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0032. Child Safety Seat Shield Usage 0033. Child Safety Seat Tether Usage 00

Note: Options below applicable to Variables OA31-OA33.

(00) No child safety seat

*Not Designed With Harness/Shield/Tether*

(01) After market harness/shield/tether added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market harness/shield/tether added

(09) Unknown if harness/shield/tether added or used

*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

*Unknown If Designed With Harness/Shield/Tether*

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used



## INJURY CONSEQUENCES

34. Injury Severity (Police Rating) 3

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

35. Treatment - Mortality 3

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):  
\_\_\_\_\_

*Nonfatal*

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (8) Treatment - other (specify):  
\_\_\_\_\_
- (9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):  
\_\_\_\_\_
- (9) Unknown

37. Hospital Stay 06

- (00) Not Hospitalized
- Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

38. Working Days Lost 99

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

**STOP - GO TO VARIABLE 44 ON PAGE 7****VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER**39. Time to Death 00

- Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)
- (00) Not fatal
- (96) Fatal - ruled disease
- (99) Unknown

40. 1st Medically Reported Cause of Death 0041. 2nd Medically Reported Cause of Death 0042. 3rd Medically Reported Cause of Death 00

- Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
- (97) Other result (includes fatal ruled disease) (specify):  
\_\_\_\_\_
- (99) Unknown

43. Number of Recorded Injuries for This Occupant 05

- Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
- (97) Injured, details unknown
- (99) Unknown if injured

**AUTOMATIC BELT SYSTEM****44. Automatic (Passive) Belt System Availability/Function**

- (0) Not equipped/not available  
 (1) 2 point automatic belts  
 (2) 3 point automatic belts  
 (3) Automatic belts - type unknown

**Non-functional**

- (4) Automatic belts destroyed or rendered inoperative  
 (9) Unknown

**45. Automatic (Passive) Belt System Use**

- (0) Not equipped/not available/destroyed or rendered inoperative  
 (1) Automatic belt in use  
 (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): \_\_\_\_\_  
 (3) Automatic belt use unknown  
 (9) Unknown

**46. Automatic (Passive) Belt System Type**

- (0) Not equipped/not available  
 (1) Non-motorized system  
 (2) Motorized system  
 (9) Unknown

**47. Proper Use of Automatic (Passive) Belt System**

- (0) Not equipped/not available/not used  
 (1) Automatic belt used properly  
 (2) Automatic belt used properly with child safety seat

**Automatic Belt Used Improperly**

- (3) Automatic shoulder belt worn under arm  
 (4) Automatic shoulder belt worn behind back  
 (5) Automatic belt worn around more than one person  
 (6) Lap portion of automatic belt worn on abdomen  
 (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): \_\_\_\_\_  
 (8) Other improper use of automatic belt system (specify): \_\_\_\_\_  
 (9) Unknown

**48. Automatic (Passive) Belt Failure Modes During Accident**

- (0) Not equipped/not available/not in use  
 (1) No automatic belt failure(s)  
 (2) Torn webbing (stretched webbing not included)  
 (3) Broken buckle or latchplate  
 (4) Upper anchorage separated  
 (5) Other anchorage separated (specify): \_\_\_\_\_  
 (6) Broken retractor  
 (7) Combination of above (specify): \_\_\_\_\_  
 (8) Other automatic belt failure (specify): \_\_\_\_\_  
 (9) Unknown

**49. Seat Orientation (this Occupant Position)**

- (0) Occupant not seated or no seat  
 (1) Forward facing seat  
 (2) Rear facing seat  
 (3) Side facing seat (inward)  
 (4) Side facing seat (outward)  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

**STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER**

**TRAUMA DATA****50. Glasgow Coma Scale (GCS) Score (at Medical Facility)**

- (00) Not injured  
 (01) Injured - not treated at medical facility  
 (02) No GCS Score at medical facility  
 (03-15) Code the actual value of the initial GCS Score recorded at medical facility.  
 (97) Injured, details unknown  
 (99) Unknown if injured

**51. Was the Occupant Given Blood?**

- (1) No - blood not given  
 (2) Yes - blood given (specify units): \_\_\_\_\_  
 (9) Unknown if blood given

**52. Arterial Blood Gases (ABG) - HCO<sub>3</sub>**

- (00) Not injured  
 (01) Injured, ABGs not measured or reported  
 (02-50) Code the actual value of the HCO<sub>3</sub>  
 (96) ABGs reported, HCO<sub>3</sub> unknown  
 (97) Injured, details unknown  
 (99) Unknown if injured

**ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION?**

NO [ ☒ ] YES [ ☐ ]

**UPDATE CANDIDATE?**

NO [ ☒ ] YES [ ☐ ]



## GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number NC5I  
2. Case Number - Stratum 9305  
3. Vehicle Number 02

## VEHICLE IDENTIFICATION

4. Vehicle Model Year 86  
Code the last two digits of the model year  
(99) Unknown
5. Vehicle Make (specify): 22  
PONTIAC  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual. 3/3  
(99) Unknown
6. Vehicle Model (specify): 018  
GRAND AM  
Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown
7. Body Type 02  
Note: Applicable codes may be found on  
the back of this page.
8. Vehicle Identification Number  
1G2NV69L3  
Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros  
Unknown—Code all nine's

## OFFICIAL RECORDS

9. Police Reported Vehicle Disposition 1  
(0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown
10. Police Reported Travel Speed 999  
Code to the nearest kph (NOTE: 000 means  
less than 0.5 kph)  
(160) 159.5 kph and above  
(999) Unknown  
\_\_\_\_ mph X 1.6093 = \_\_\_\_ kph

11. Police Reported Alcohol Presence 0  
(0) No alcohol present  
(1) Yes (alcohol present)  
(7) Not reported  
(8) No driver present  
(9) Unknown

Note: See variables 37 through 55  
(Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver 00  
Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

Source: \_\_\_\_\_

## ACCIDENT RELATED

13. Speed Limit 072  
(000) No statutory limit  
Code posted or statutory speed limit  
in kph  
(999) Unknown  
\_\_\_\_ mph X 1.6093 = \_\_\_\_ kph
14. Attempted Avoidance Maneuver 99  
(00) No impact  
(01) No avoidance actions  
(02) Braking (no lockup)  
(03) Braking (lockup)  
(04) Braking (lockup unknown)  
(05) Releasing brakes  
(06) Steering left  
(07) Steering right  
(08) Braking and steering left  
(09) Braking and steering right  
(10) Accelerating  
(11) Accelerating and steering left  
(12) Accelerating and steering right  
(97) No driver present  
(98) Other action (specify):  
(99) Unknown
15. Accident Type 65  
Applicable codes may be found on the  
back of page two of this field form  
(00) No impact  
Code the number of the diagram that  
best describes the accident circumstance  
(98) Other accident type (specify):  
(99) Unknown

\*\*\*\* SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 \*\*\*\*

# CODES FOR BODY TYPE

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): \_\_\_\_\_

- (09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,500$ kgs GVWR)

- (20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ( $\leq 4,500$  kgs GVWR)
- (23) Van based motorhome ( $\leq 4,500$  kgs GVWR)
- (24) Van based school bus ( $\leq 4,500$  kgs GVWR)
- (25) Van based other bus ( $\leq 4,500$  kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): \_\_\_\_\_

- (29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): \_\_\_\_\_
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,500$ kgs GVWR)

- (60) Step van ( $> 4,500$  kgs GVWR)
- (61) Single unit straight truck (4,500 kgs  $<$  GVWR  $\leq$  8,850 kgs)
- (62) Single unit straight truck (8,850 kgs  $<$  GVWR  $\leq$  12,000 kgs)
- (63) Single unit straight truck ( $> 12,000$  kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): \_\_\_\_\_
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## OCCUPANT RELATED

16. Driver Presence in Vehicle 1  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
17. Number of Occupants This Vehicle 02  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
18. Number of Occupant Forms Submitted 00

24. Rollover 0  
 (0) No rollover (no overturning)

*Rollover (primarily about the longitudinal axis)*

- (1) Rollover, 1 quarter turn only  
 (2) Rollover, 2 quarter turns  
 (3) Rollover, 3 quarter turns  
 (4) Rollover, 4 or more quarter turns (specify):  
 \_\_\_\_\_

- (5) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (9) Rollover (overturn), details unknown

## VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight 1,200  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (045) Less than 450 kilograms  
 (610) 6,100 kilograms or more  
 (999) Unknown  
2,639 lbs X .4536 = 1,197 kgs  
 Source: \_\_\_\_\_

20. Vehicle Cargo Weight 0,000  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (450) 4,500 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs

## OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) 0  
 26. Rear Override/Underride (this Vehicle) 0

- (0) No override/underride, or not an end-to-end impact

*Override (see specific CDC)*

- (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify):  
 \_\_\_\_\_

*Underride (see specific CDC)*

- (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify):  
 \_\_\_\_\_

- (7) Medium/heavy truck or bus override  
 (9) Unknown

## RECONSTRUCTION DATA

21. Towed Trailing Unit 0  
 (0) No towed unit  
 (1) Yes--towed trailing unit  
 (9) Unknown

22. Documentation of Trajectory Data for This Vehicle 0  
 (0) No  
 (1) Yes

23. Post Collision Condition of Tree or Pole (For Highest Delta V) 0  
 (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted <45 degrees  
 (4) Tilted ≥45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify):  
 \_\_\_\_\_  
 (9) Unknown

## HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown

27. Heading Angle For This Vehicle 999  
 28. Heading Angle For Other Vehicle 999

29. Basis for Total Delta V (highest) 1*Delta V Calculated*

- (1) CRASH program—damage only routine
- (2) CRASH program—damage and trajectory routine
- (3) Missing vehicle algorithm

*Delta V Not Calculated*

- (4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
- (5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
- (6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

**COMPUTER GENERATED DELTA V**

## 30. Total Delta V

Secondary Highest

02222 Nearest kph

(NOTE: 000 means less than  
0.5 kph)  
(160) 159.5 kph and above  
(999) Unknown

## 31. Longitudinal Component of Delta V

+ 021-21 Nearest kph

(NOTE: \_\_000 means greater than  
-0.5 kph and less than +0.5 kph)  
(±160) ±159.5 kph and above  
(\_\_999) Unknown

Secondary

Highest

## 32. Lateral Component of Delta V

0044 Nearest kph

(NOTE: \_\_000 means greater than  
-0.5 kph and less than +0.5 kph)  
(±160) ±159.5 kph and above  
(\_\_999) Unknown

## 33. Energy Absorption

067.4 0067442 Nearest 100 joules

(NOTE: 0000 means less than 50 joules)  
(9997) 999,650 joules or more  
(9999) Unknown

## 34. Confidence In Reconstruction Program Results (For Highest Delta V)

- (0) No reconstruction
- (1) Collision fits model — results appear reasonable
- (2) Collision fits model — results appear high
- (3) Collision fits model — results appear low
- (4) Borderline reconstruction — results appear reasonable

## 35. Type of Vehicle Inspection

- (0) No inspection
- (1) Complete inspection
- (2) Partial inspection (specify):

## 36. Is this an AOPS Vehicle?

- (0) No
- (1) Yes - researcher determined
- (2) VIN determined air bag system
- (3) VIN determined automatic (passive) belts
- (4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [ ] YES [ ☒ ] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

37. Police Reported Other Drug Presence 0

- (0) No other drugs present
- (1) Yes (other drug present)
- (7) Not reported
- (8) No driver present
- (9) Unknown

38. Police Reported Drug Evaluation Classification (DEC) Test For Driver 0

- (0) No DEC process available or given
- (1) DEC process given, results known
- (2) DEC process given, results unknown
- (3) DEC process available, unknown if given
- (8) No driver present

39. Other Drug Specimen Test Type For Driver 0

- (0) No specimen test given
- (1) Blood test
- (2) Urine test
- (3) Other specimen tests (specify):
- (7) Unspecified specimen test
- (8) No driver present
- (9) Unknown if specimen test given

**DRUG EVALUATION CLASSIFICATION  
OTHER DRUGS TEST RESULTS FOR DRIVER**

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. <u>0</u>	41. <u>0</u>
Depressant Drug	42. <u>0</u>	43. <u>0</u>
Stimulant Drug	44. <u>0</u>	45. <u>0</u>
Hallucinogen Drug	46. <u>0</u>	47. <u>0</u>
Cannabinoid Drug	48. <u>0</u>	49. <u>0</u>
Phencyclidine (PCP)	50. <u>0</u>	51. <u>0</u>
Inhalant Drug	52. <u>0</u>	53. <u>0</u>
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. <u>0</u>	55. <u>0</u>

## Codes For DEC Test Results

- (0) No DEC test given
- (1) Passed DEC test
- (2) Failed DEC test
- (3) DEC test given—results unknown
- (8) No driver present
- (9) Unknown if DEC test given

## Codes for Specimen Test Results

- (0) No specimen test given
- (1) Drug not found in specimen
- (2) Drug found in specimen
- (7) Specimen test given, results unknown or not obtained
- (8) No driver present
- (9) Unknown if specimen test given

## OTHER DATA

## 56. Driver's Zip Code

- (00000) Driver not present  
(00001) Driver not a resident of U.S. or territories  
Code actual 5-digit zip code  
(99999) Unknown

## 57. Driver's Race/Ethnic Origin

- (0) Driver not present  
(1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(8) Other (specify):  
(9) Unknown

## 58. Vehicle Special Use (This Trip)

- (0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

## ROLLOVER DATA

If GV07 (Body Type)  $\neq$  1-49, leave GV59-GV63 blank.  
If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.  
If GV24 = 9, then GV59-GV63 must equal 9.

## 59. Rollover Initiation Type

- (0) No rollover  
(1) Trip-over  
(2) Flip-over  
(3) Turn-over  
(4) Climb-over  
(5) Fall-over  
(6) Bounce-over  
(7) Collision with another vehicle  
(8) Other rollover initiation type (specify):  
(9) Unknown rollover initiation type

## 60. Location of Rollover Initiation

- (0) No rollover  
(1) On roadway  
(2) On shoulder—paved  
(3) On shoulder—unpaved  
(4) On roadside or divided trafficway median  
(9) Unknown

## 61. Rollover Initiation Object Contacted

## 62. Location on Vehicle Where Initial Principal Tripping Force Is Applied

- (0) No rollover  
(1) Wheels/tires  
(2) Side plane  
(3) End plane  
(4) Undercarriage  
(5) Other location on vehicle (specify):  
(8) Non-contact rollover forces (specify):  
(9) Unknown

## 63. Direction of Initial Roll

- (0) No rollover  
(1) Roll right - primarily about the longitudinal axis  
(2) Roll left - primarily about the longitudinal axis  
(5) End-over-end (i.e., primarily about the lateral axis)  
(9) Unknown roll direction

## PRECRASH DATA

## 64. Pre-Event Movement (Prior to Recognition of Critical Event)

- (01) Going straight  
(02) Slowing or stopping in traffic lane  
(03) Starting in traffic lane  
(04) Stopped in traffic lane  
(05) Passing or overtaking another vehicle  
(06) Disabled or parked in travel lane  
(07) Leaving a parking position  
(08) Entering a parking position  
(09) Turning right  
(10) Turning left  
(11) Making a U-turn  
(12) Backing up (other than for parking position)  
(13) Negotiating a curve  
(14) Changing lanes  
(15) Merging  
(16) Successful avoidance maneuver to a previous critical event  
(97) Other (specify):  
(98) No driver present  
(99) Unknown



## CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

(00) No rollover

(01-30) — Vehicle Number

### Noncollision

(31) Turn-over — fall-over

(33) Jackknife

### Collision With Fixed Object

(41) Tree ( $\leq 10$  cm in diameter)

(42) Tree ( $> 10$  cm in diameter)

(43) Shrubbery or bush

(44) Embankment

(45) Breakaway pole or post (any diameter)

### Nonbreakaway Pole or Post

(50) Pole or post ( $\leq 10$  cm in diameter)

(51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)

(52) Pole or post ( $> 30$  cm in diameter)

(53) Pole or post (diameter unknown)

(54) Concrete traffic barrier

(55) Impact attenuator

(56) Other traffic barrier (includes guardrail)  
(specify): \_\_\_\_\_

(57) Fence

(58) Wall

(59) Building

(60) Ditch or culvert

(61) Ground

(62) Fire hydrant

(63) Curb

(64) Bridge

(68) Other fixed object (specify): \_\_\_\_\_

(69) Unknown fixed object

### Collision with Nonfixed Object

(71) Motor vehicle not in-transport

(76) Animal

(77) Train

(78) Trailer, disconnected in transport

(88) Other nonfixed object (specify): \_\_\_\_\_

(89) Unknown nonfixed object

(98) Other event (specify): \_\_\_\_\_

(99) Unknown event or object

## PRECRASH DATA (Continued)

65. Critical Precrash Event 62*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
- (02) Stalled engine
- (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_
- (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_
- (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_
- (06) Traveling too fast for conditions
- (08) Other cause of control loss (specify): \_\_\_\_\_
- (09) Unknown cause of control loss

*This Vehicle Traveling*

- (10) Over the lane line on left side of travel lane
- (11) Over the lane line on right side of travel lane
- (12) Off the edge of the road on the left side
- (13) Off the edge of the road on the right side
- (14) End departure
- (15) Turning left at intersection
- (16) Turning right at intersection
- (17) Crossing over (passing through) intersection
- (19) Unknown travel direction

*Other Motor Vehicle In Lane*

- (50) Stopped
- (51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
- (52) Traveling in same direction with higher speed
- (53) Traveling in opposite direction
- (54) In crossover
- (55) Backing
- (59) Unknown travel direction of other motor vehicle in lane

*Other Motor Vehicle Encroaching Into Lane*

- (60) From adjacent lane (same direction)—over left lane line
- (61) From adjacent lane (same direction)—over right lane line
- (62) From opposite direction—over left lane line
- (63) From opposite direction—over right lane line
- (64) From parking lane
- (65) From crossing street, turning into same direction
- (66) From crossing street, across path
- (67) From crossing street, turning into opposite direction
- (68) From crossing street, intended path not known
- (70) From driveway, turning into same direction
- (71) From driveway, across path
- (72) From driveway, turning into opposite direction
- (73) From driveway, intended path not known
- (74) From entrance to limited access highway
- (78) Encroachment by other vehicle—details unknown

*Pedestrian or Pedalcyclist, or Other Nonmotorist*

- (80) Pedestrian in roadway
- (81) Pedestrian approaching roadway
- (82) Pedestrian - unknown location
- (83) Pedalcyclist or other nonmotorist in roadway (specify): \_\_\_\_\_
- (84) Pedalcyclist or other nonmotorist approaching roadway (specify): \_\_\_\_\_
- (85) Pedalcyclist or other nonmotorist—unknown location (specify): \_\_\_\_\_

*Object or Animal*

- (87) Animal in roadway
- (88) Animal approaching roadway
- (89) Animal—unknown location
- (90) Object in roadway
- (91) Object approaching roadway
- (92) Object—unknown location
- (98) Other critical precrash event (specify): \_\_\_\_\_
- (99) Unknown

For Corrective Actions Attempted see variable GV14  
(Attempted Avoidance Maneuver)

66. Precrash Stability After Avoidance Maneuver 9

- (0) No avoidance maneuver
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): \_\_\_\_\_
- (8) No driver present
- (9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action) 9

- (0) No avoidance maneuver
- (1) Vehicle stayed in travel lane where avoidance maneuver was initiated
- (2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
- (3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
- (4) Vehicle departed roadway
- (5) Avoidance maneuver initiated off roadway
- (8) No driver present
- (9) Directional consequences unknown

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35 = 0), \*\*\*  
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*  
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

Appendix C  
NICB V.I.N. Data

(c) by [REDACTED] 1991

Law Enforcement Edition

VIN:6MPCT01Z3M[REDACTED]

DIGIT	DESCRIPTION	MEANING
6	Country of Origin	AUSTRALIA
M	Manufacturer	MERC MERCURY
P	Vehicle Type	PASSENGER CAR
C	Restraint System	AIR BAG & ACTIVE BELTS
T	Line	PASSENGER CAR (IMPORT)
01	Body Style	CAPRI 2 DR CONVERTIBLE
Z	Engine	1.6L I4 EFI TC
3	Check Digit	CHECK DIGIT VALID
M	Year	1991
8	Assembly Plant	[REDACTED] AUSTRALIA
[REDACTED]	Sequence Number	IN RANGE

\*\*\*\*\* VIN Passed Test \*\*\*\*\*

VIN indicates a 1991 MERCURY CAPRI 2 DR CONVERTIBLE

(c) by [REDACTED], 1991

(c) by [REDACTED] 1991

Law Enforcement Edition

VIN: 1G2NV69L3GC[REDACTED]

DIGIT	DESCRIPTION	MEANING
1	Country of Origin	UNITED STATES
G	Manufacturer	PONT GENERAL MOTORS
2	Make	PONTIAC
NV	Line	GRAND AM LE
69	Body Style	4 DR SEDAN
L	Engine	3.0L V6 MFI, FI
3	Check Digit	CHECK DIGIT VALID
G	Year	1986
C	Assembly Plant	[REDACTED] MI
[REDACTED]	Sequence Number	IN RANGE

\*\*\*\*\* VIN Passed Test \*\*\*\*\*

VIN indicates a 1986 GENERAL MOTORS GRAND AM LE

(c) by [REDACTED], 1991

Appendix D  
Airbag Supplement

ACCIDENT SUMMARY

ACCIDENT DATE 1992

POLICE INVESTIGATED (1,2,9)\*

Fulton County, GA

City \_\_\_\_\_ County \_\_\_\_\_

GENERAL LOCALITY

- (1) Freeway, Limited Access
- (2) Urban (City)
- (3) Urban-Rural (mixed)
- (4) Rural, Fields

CONFIGURATION (First Harm)

- (0) Struck Object or Pedestrian
- (1) Rear-End
- (2) Head-On
- (3) Rear-to-Rear
- (4) Angle
- (5) Sideswipe-Same Direction
- (6) Sideswipe-Opposite Direct.
- (7) NonCollision Fell from Veh
- (8) NonImpact Deployment
- (9) Unknown

FIRE INVOLVED (0) None

- (1) AirBag Vehicle
- (2) Other Vehicle
- (3) Both Vehicles
- (9) Unknown

NUMBER: VEHICLES INVOLVED

(8)=8 or more

PERSONS INVOLVED

INJURED PERSONS

MAXIMUM AIS IN ACCIDENT

OTHER VEHICLE: MAXIMUM AIS

PRIME/DEPLOY IMPACT w AB VEH:  
EVENT NUMBER

CDC 01-BZEW-2

TOTAL DELTA-V

Model Year, Make, Model, Body Type:

86 Pontiac Grand Am

AIRBAG VEHICLE INSPECTION

DATE VEH. INSPECTED 1993

REASON VEHICLE NOT INSPECTED

- (0) Not Required
- (1) Inspection Completed
- (2) Cannot be Located\*\*
- (3) Repaired or Destroyed\*\*
- (5) Refual or Impounded\*\*
- (7) Other\*

\*\*Specify: \_\_\_\_\_

IMPACT DATA OBTAINED

- (0) No Data Obtained
- (1) CDC Only
- (2) Crush Profile Only
- (3) Trajectory Data Only
- (4) CDC and Crush Profile
- (5) CDC and Trajectory
- (6) Crush and Trajectory
- (7) CDC, Crush & Trajectory

BASIS OF DELTA-V

- (0) Not Computed (Unknown Why)
- (1) CRASH - Damage Only
- (2) CRASH - Damage+Trajectory
- (3) Missing Vehicle Algorithm
- (4) Yielding Object Algorithm
- (5) Unknown Basis
- (6) One Vehicle Beyond Scope
- (7) Collision Beyond Scope
- (8) Insufficient Data

VEHICLE HISTORY

HAS AIRBAG VEHICLE BEEN IN  
ANY PRIOR IMPACTS (1,2,9)\*

HAS ANY PRIOR MAINTENANCE/SERVICE  
BEEN PERFORMED ON SYSTEM(1,2,9)\*

\*Describe: \_\_\_\_\_

AIRBAG VEHICLE: FLEET PRIVATE OWNER

VIN 6MPC

MILEAGE \_\_\_\_\_

SYSTEM READINESS LAMP (In Instrument Cluster)		AIRBAG VEHICLE FIRST HARMFUL EVENT	13
<p>PRE-IMPACT LAMP CONDITION</p> <p>(1) Functioning/ProvedOut</p> <p>(2) Inoperative</p> <p>(9) Unknown</p>	<p><u>9</u></p>	<p>(01) Fire or explosion</p> <p>(02) Immersion</p> <p>(03) Gas Inhalation</p> <p>(04) Fell from vehicle</p> <p>(05) Injured in vehicle</p> <p>(06) Other noncollision (specify):</p> <p>(07) Overturn</p> <p>(08) Jackknife with intraunit damage</p>	
<p>DRIVER'S REPORT OF PRE-IMPACT FLASHING</p> <p>(00) No Flashing Reported</p> <p>(01) Continuous Flashing</p> <p>(02) -- &gt;Number of Flashes</p> <p>(11)</p> <p>(12) Constant Light</p> <p>(19) Flashing, Unkn Number</p> <p>(88) Not App (system removed)</p> <p>(99) Unknown</p>	<p><u>00</u></p>	<p>Collision With:</p> <p>(09) Pedestrian</p> <p>(10) Pedalcyclist</p> <p>(11) Railway train</p> <p>(12) Animal</p> <p>(13) Motor vehicle in transport (same roadway)</p> <p>(14) Motor vehicle in transport (other roadway)</p> <p>(15) Parked motor vehicle</p> <p>(16) Other type nonmotorist (specify):</p> <p>(17) Thrown or falling object</p> <p>(18) Boulder</p>	
<p>PERIOD OF PRE-IMPACT FLASHING</p> <p>(0) No Flashing</p> <p>(1) Same Day as Impact</p> <p>(2) Prior Day</p> <p>(3) Prior Two Days</p> <p>(4) Prior Week</p> <p>(5) Prior Month</p> <p>(6) Over One Month</p> <p>(9) Unknown</p>	<p><u>0</u></p>	<p>Collision with Fixed Object:</p> <p>(20) Building</p> <p>(21) Impact attenuator/Crash Cushion</p> <p>(22) Bridge pier or abutment</p> <p>(23) Bridge parapet end</p> <p>(24) Bridge rail</p> <p>(25) Guardrail</p> <p>(26) Concrete traffic barrier</p> <p>(27) Median barrier</p> <p>(28) Other longitudinal barrier (specify):</p> <p>(29) Highway/Traffic sign post</p> <p>(30) Overhead sign support</p> <p>(31) Luminaire/Light support</p>	
<p>POST-IMPACT LAMP CONDITION</p> <p>(1) Functioning/ProvedOut</p> <p>(2) Inoperative</p> <p>(9) Unknown</p>	<p><u>9</u></p>	<p>(32) Utility pole</p> <p>(33) Other post, pole, or support (specify):</p> <p>(34) Culvert</p> <p>(35) Curb</p> <p>(36) Ditch</p> <p>(37) Embankment-earth</p>	
<p>POST-IMPACT FLASHING</p> <p>(00) No Flashing</p> <p>(01) Continuous Flashing</p> <p>(02) -- &gt;Number of Flashes</p> <p>(11)</p> <p>(12) Constant Light</p> <p>(19) Flashing, Unkn Number</p> <p>(88) Not Appl (removed)</p> <p>(99) Unknown</p>	<p><u>99</u></p>	<p>(38) Embankment-rock, stone or concrete</p> <p>(39) Fence (wooden, wire, chain link, etc.)</p> <p>(40) Wall (stone, rock, metal, etc.)</p> <p>(41) Fire hydrant</p> <p>(42) Shrubbery</p> <p>(43) Tree</p> <p>(44) Other fixed object (specify):</p> <p>(45) Pavement surface irregularity (pothole, grooved, grates)</p> <p>(99) Unknown</p>	



## AIRBAG VEHICLE IMPACT SUMMARY

## VEHICLE ROLE

- (0) Non-collision  
 (1) Striking Unit  
 (2) Struck Unit  
 (3) Both Striking and Struck  
 (9) Unknown

## MANNER OF LEAVING SCENE

- (1) Driven  
 (2) Towed-due to damage  
 (3) Towed - not for damage  
 (4) Towed - details unknown  
 (5) Abandoned  
 (9) Unknown

## NUMBER OF IMPACT EVENTS

- (8) 8 or more, (9) Unknown

## ROLLOVER (0) No Rollover

- (1) First Event  
 (2) Subsequent Event  
 (3) Yes, Unknown Event  
 (9) Unknown

## OVERRIDE/UNDERRIDE

- (0) No over/underride  
 (1) Override - 1st CDC  
 (3) - Other CDC  
 (4) Underride - 1st CDC  
 (6) - Other CDC  
 (9) Unknown

## AIRBAG VEHICLE DAMAGE

- CODES: (1) Yes, DAMAGED  
 (2) No Damage  
 (9) Unknown

## LEFT FRONT FENDER DAMAGE

## RIGHT FRONT FENDER DAMAGE

## CENTER TOP OF GRILLE DAMAGE

## FRONT BUMPER E.A. STATUS: Left

- (1) Normal  
 (2) Extended  
 (3) Partial Compression  
 (4) Complete Compression  
 (5) Not Applicable  
 (9) Unknown

## FIRST AIRBAG VEHICLE IMPACT:

## CONFIGURATION

- (0) Struck Object or Pedestrian  
 (1) Rear-End  
 (2) Head-On  
 (3) Rear-to-Rear  
 (4) Angle  
 (5) Sideswipe - Same Direction  
 (6) Sideswipe-Opposite Direct.  
 (7) NonCollision Fell from Veh  
 (8) Nonimpact Deployment  
 (9) Unknown

CDC 01 - R Z E W - 2OBJECT CONTACTED: 86 GRAND Am

## PRIMARY/DEPLOYMENT IMPACT:

## EVENT NUMBER

## TOTAL DELTA-V

## LONGITUDINAL DELTA-V

## CONFIGURATION

- (0) Struck Object or Pedestrian  
 (1) Rear-End  
 (2) Head-On  
 (3) Rear-to-Rear  
 (4) Angle  
 (5) Sideswipe - Same Direction  
 (6) Sideswipe-Opposite Direct.  
 (7) NonCollision Fell from Veh  
 (8) Nonimpact Deployment  
 (9) Unknown

CDC 01 - R Z E W - 2OBJECT CONTACTED: 86 GRAND Am

## NOTES:

## SYSTEM DAMAGE

AIRBAG SUPPLEMENT AB-

## AIRBAG SYSTEM DAMAGE

CODES: (1) Yes, Damaged\*  
 (2) No, Intact  
 (8) Not App.(Removed)  
 (9) Unknown

## AIRBAG MODULE

SENSORS: Left Front

Center Front

Right Front

Rear, Cowl

## DIAGNOSTIC MODULE

## WIRING

## KNEE DIVERTER

INDICATION OF DISCONNECTED  
 OR LOOSE ELECTRICAL  
 CONNECTORS

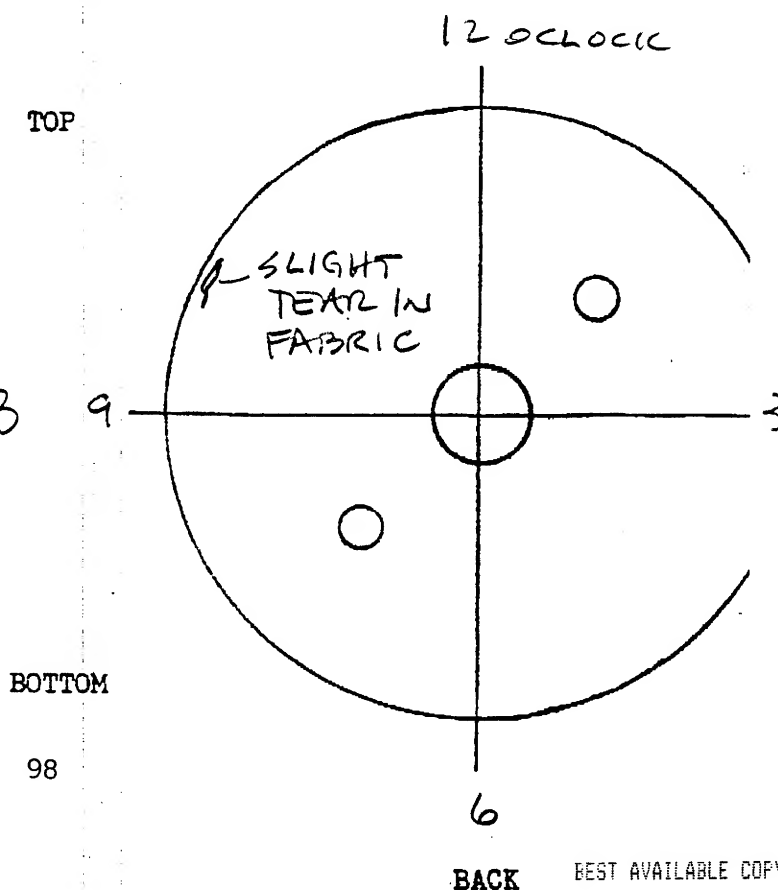
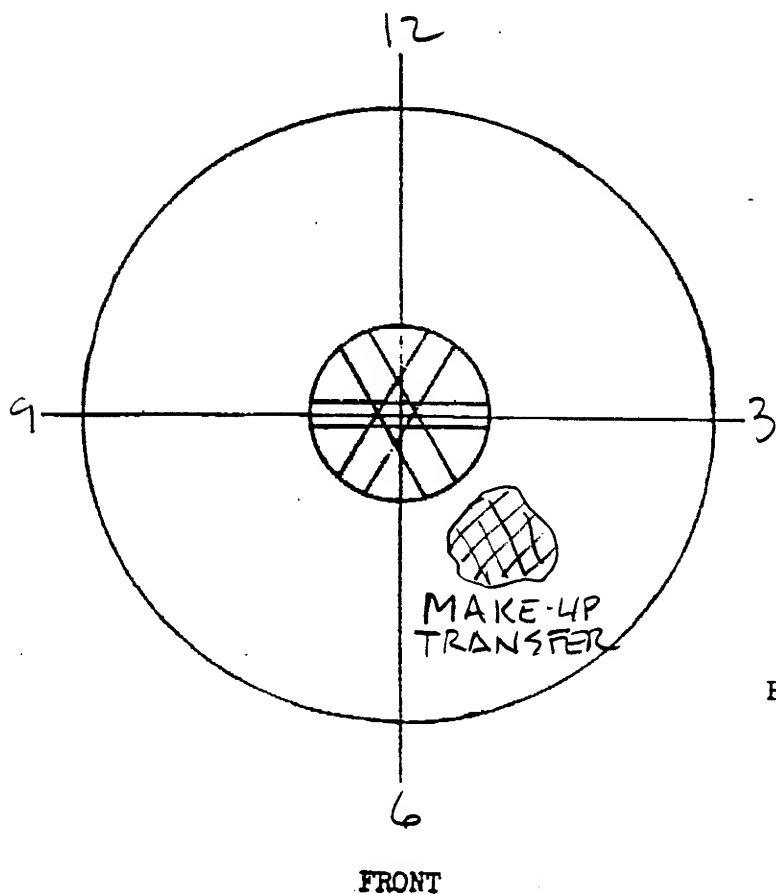
## CONDITION OF DEPLOYED BAG

(1) Bag Intact  
 (2) Split or Torn\*  
 (3) Cut by Object in Impact\*  
 (4) Cut after Accident\*  
 (5) Other (e.g., burned)\*  
 (8) N/A (not deployed)  
 (9) Unknown

## \*DESCRIBE System and Bag Damage:

A SMALL (LESS THAN  
 1") TEAR WAS  
 PRESENT ON THE BACK  
 SURFACE OF THE  
 AIRBAG @ APPROX.  
 10 O'CLOCK

NOTE DAMAGE AND CONTACT MARKS ON AIRBAG DIAGRAMS BELOW:



TOP

BOTTOM

98

BEST AVAILABLE COPY

**NOTES:**

NUMBER OF OCCUPANTS IN VEHICLE

(8) 8 or more

NUMBER OF INJURED PERSONS

MAXIMUM AIS IN AIRBAG VEHICLE

(0) No Injury

(1-6) AIS Severity

(7) Injured, Unknown Severity

(9) Unknown

DRIVER AGE 25 SEX 2

NUMBER OF DRIVER INJURIES

### SOURCE OF BEST INJURY DATA

(0) Not Injured

(1) Autopsy w/wo med. records

(2) Hospital Medical Records

(3) Emergency Room only

(4) Private physician, Clinic

(5) Lay Coroner Report

(6) EMS Personnel

(7) Interviewee

(8) Police

(9) Unknown

### MAXIMUM AIS BY BODY REGION

REGION

**MAX AIS**

## CONTACT

### Head/Neck/Face

**Chest**

## Abdomen

### Leg/Hips

Other (Arms)

DRIVER MAXIMUM

EJECTION: Extent N/A

Portal \_\_\_\_\_

## DRIVER-PASSENGER

AIRBAG SUPPLEMENT AB-6

**DRIVER BELT USAGE:** (1) Used (2) Not Used (9) Unknown 2

Evidence: \_\_\_\_\_

**DRIVER POSTURE:** Any Comments Recorded (1) Yes, (2) No 2

Describe driver's posture and position on seat including specific comments on head, torso, buttocks, legs and feet. Also note hand and arm position. Did driver brace before crash? Describe:

THE DRIVER STATED THAT SHE WAS CRAWLING FROM THE DRIVER'S SEAT TO THE RIGHT FRONT SEAT TO EXIT THE VEHICLE WHEN IT WAS STRUCK BY THE GRAND AM.

**DRIVER FOREIGN OBJECTS:** Comments Recorded (1) Yes, (2) No 2

Was driver wearing contact lenses or eyeglasses? Or holding any foreign object at the time of the impact (packages on lap, pipe, food, bottle, cigarette, etc.)? Did any lenses, objects, or jewelry play any role?:

**DRIVER COMMENTS:** Comments Recorded (1) Yes, (2) No 2

Was the driver aware that the vehicle was equipped with a supplemental restraint system? Did driver offer any comments on smoke, noise, etc.? Did the driver comment on the airbag as a restraint system? Describe:

THE DRIVER STATED THAT THE AIRBAG DEPLOYED PRIOR TO ANY IMPACTS. AS SHE WAS DRIVING ALONE.

**PASSENGER-AIRBAG CONTACT** (1) Yes, (2) No, (9) Unknown 2

Describe: \_\_\_\_\_

Appendix E  
CRASH 3 Output



## CRASHPC PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM

Identifying Title			
<u>NCSE</u> Primary Sampling Unit	<u>93-05</u> Case No.-Stratum	<u>01</u> Accident Event Sequence No.	<u>994</u> Date (Month, day, year) of Run
CRASHPC Vehicle Identification			
Vehicle 1	<u>91</u>	<u>MERCURY</u>	<u>CAPRI</u>
Vehicle 2	<u>86</u>	<u>PONTIAC</u>	<u>GRAND AM</u>
	Year	Make	Model
			NASS Veh. No. <u>1</u> <u>2</u>
GENERAL INFORMATION			
VEHICLE 1		VEHICLE 2	
Size	<u>1</u>	Size	<u>3</u>
Weight		Weight	
<u>1082</u> + <u>48</u> + <u>0</u> = <u>1130</u> kg		<u>1197</u> + <u>78</u> + <u>0</u> = <u>1275</u> kg	
Curb Occupant(s) Cargo		Curb Occupant(s) Cargo	
CDC	<u>01RZEW2</u>	CDC	<u>12FZEW3</u>
PDOF (-180 to +180)	<u>0030</u> °	PDOF (-180 to +180)	<u>0010</u> °
Stiffness	<u>1</u>	Stiffness	<u>3</u>
SCENE INFORMATION			
Rest and Impact Positions [ ] No, Go To Damage Information [ ] Yes			
VEHICLE 1		VEHICLE 2	
Rest Position	X _____ m Y _____ m PSI _____ °	Rest Position	X _____ m Y _____ m PSI _____ °
Impact Position	X _____ m Y _____ m PSI _____ °	Impact Position	X _____ m Y _____ m PSI _____ °
Slip Angle(-180 to +180)	_____ °	Slip Angle (-180 to +180)	_____ °
VEHICLE MOTION			
Sustained Contact [ ] No [ ] Yes			
VEHICLE 1		VEHICLE 2	
Vehicle Rotation [ ] No [ ] Yes		Vehicle Rotation [ ] No [ ] Yes	
Rotation Stop Before Rest [ ] No [ ] Yes		Rotation Stop Before Rest [ ] No [ ] Yes	
End of Rotation Position	X _____ m Y _____ m PSI _____ °	End of Rotation Position	X _____ m Y _____ m PSI _____ °
Curved Path [ ] No [ ] Yes		Curved Path [ ] No [ ] Yes	
Point on Path X _____ m Y _____ m		Point on Path X _____ m Y _____ m	
Rotation Direction [ ] None [ ] CW [ ] CCW		Rotation Direction [ ] None [ ] CW [ ] CCW	
Rotation >360° [ ] No [ ] Yes		Rotation >360° [ ] No [ ] Yes	

**FRICTION INFORMATION**

Coefficient of Friction . \_\_\_\_\_

Rolling Resistance Option \_\_\_\_\_

## Vehicle 1 Rolling Resistance

LF \_\_\_\_\_ RF \_\_\_\_\_

LR \_\_\_\_\_ RR \_\_\_\_\_

## Vehicle 2 Rolling Resistance

LF \_\_\_\_\_ RF \_\_\_\_\_

LR \_\_\_\_\_ RR \_\_\_\_\_

**TRAJECTORY INFORMATION**

Trajectory Data [ ] No [ ] Yes

*If No, Go To Damage Information*

## Vehicle 1 Steer Angles

LF \_\_\_\_\_ ° RF \_\_\_\_\_ °

LR \_\_\_\_\_ ° RR \_\_\_\_\_ °

## Vehicle 2 Steer Angles

LF \_\_\_\_\_ ° RF \_\_\_\_\_ °

LR \_\_\_\_\_ ° RR \_\_\_\_\_ °

Terrain Boundary [ ] No [ ] Yes

## First Point

X \_\_\_\_\_ m Y \_\_\_\_\_ m

## Second Point

X \_\_\_\_\_ m Y \_\_\_\_\_ m

Secondary Coefficient of Friction \_\_\_\_\_

**DAMAGE INFORMATION**

## VEHICLE 1

## VEHICLE 2

Damage Length L \_\_\_\_\_ cm

Damage Length L \_\_\_\_\_ cm

Crush Depths C<sub>1</sub> \_\_\_\_\_ cmCrush Depths C<sub>1</sub> \_\_\_\_\_ cmC<sub>2</sub> \_\_\_\_\_ cmC<sub>2</sub> \_\_\_\_\_ cmC<sub>3</sub> \_\_\_\_\_ cmC<sub>3</sub> \_\_\_\_\_ cmC<sub>4</sub> \_\_\_\_\_ cmC<sub>4</sub> \_\_\_\_\_ cmC<sub>5</sub> \_\_\_\_\_ cmC<sub>5</sub> \_\_\_\_\_ cmC<sub>6</sub> \_\_\_\_\_ cmC<sub>6</sub> \_\_\_\_\_ cmDamage Offset D <sup>+</sup> \_\_\_\_\_ cmDamage Offset D <sup>+</sup> \_\_\_\_\_ cmIF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE *NOT IN TRANSPORT*, FILL IN THE INFORMATION BELOW.

Model Year: \_\_\_\_\_

Make: \_\_\_\_\_

Model: \_\_\_\_\_

VIN: \_\_\_\_\_

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate vehicle damage sketch and dimensions to the Form.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

NCSI 93-05

SPEED CHANGE  
(DAMAGE)

## VEHICLE #1

TOTAL	24 KPH ( 15 MPH)
LONGITUDINAL	-21 KPH ( -13 MPH)
LATITUDINAL	-12 KPH ( -8 MPH)
PDOF ANGLE	30 DEGREES
ENERGY DISSIPATED =	10471 JOULES ( 7722 FT-LB)

## VEHICLE #2

TOTAL	22 KPH ( 13 MPH)
LONGITUDINAL	-21 KPH ( -13 MPH)
LATITUDINAL	4 KPH ( 2 MPH)
PDOF ANGLE	-10 DEGREES
ENERGY DISSIPATED =	67442 JOULES ( 49736 FT-LB)



## DAMAGE DATA

-----

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	1	3
STIFFNESS CATEGORY	1	3
VEHICLE WEIGHT	1130 KGS ( 2491 LBS)	1275 KGS ( 2811 LBS)
ADC	01RZEW2	12FZEW3
DOF ANGLE	30 DEGREES *	-10 DEGREES
CRUSH LENGTH	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
C1	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
C2	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
C3	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
C4	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
C5	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
C6	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
D	0 CM. ( 0 IN.) *	0 CM. ( 0 IN.) *
7'	-79 CM. ( -31 IN.) *	46 CM. ( 18 IN.) *

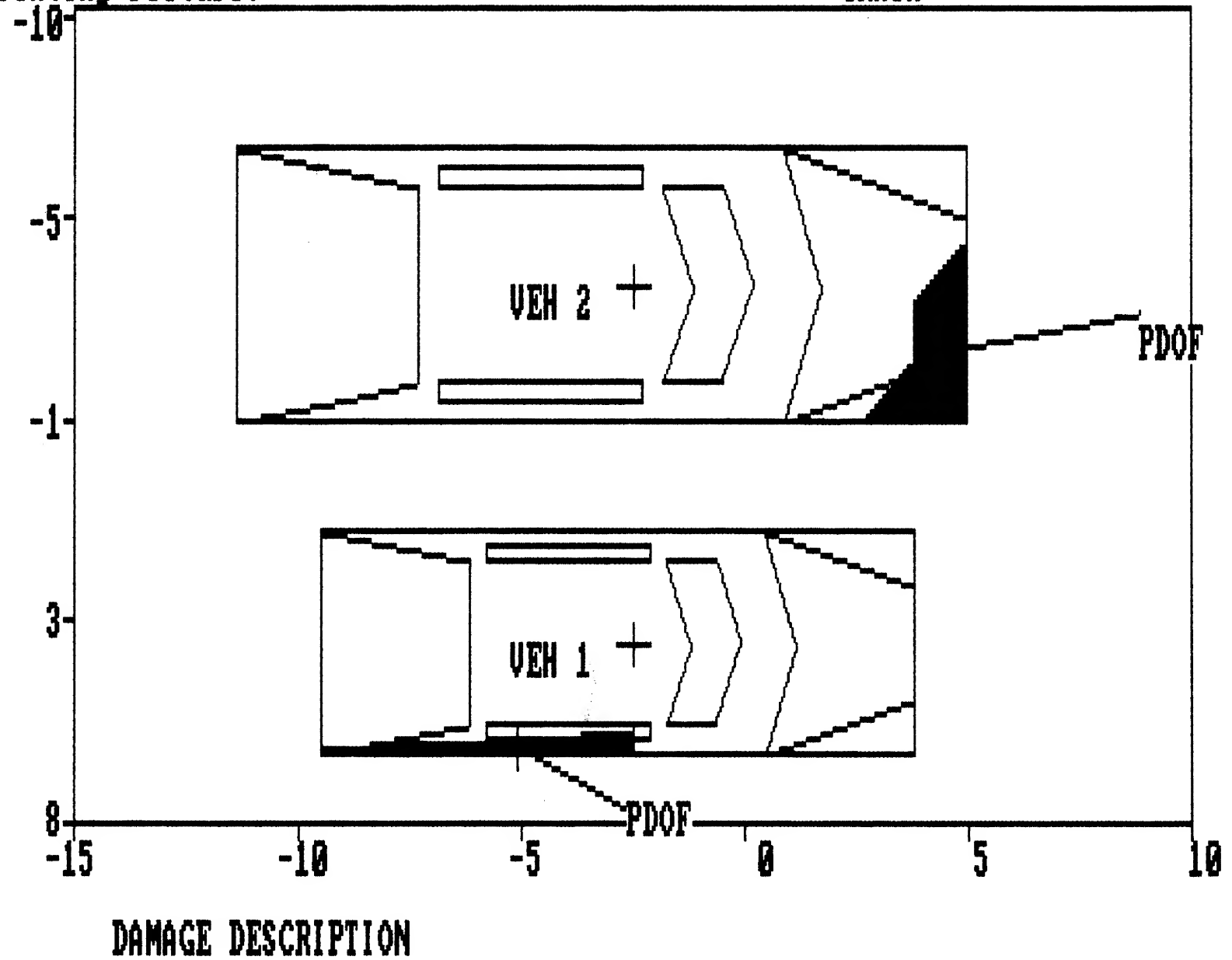
(\* INDICATES DEFAULT VALUE)

# DIMENSIONS AND INERTIAL PROPERTIES -----

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	115 CM. ( 45 IN.)	130 CM. ( 51 IN.)
CG TO REAR AXLE	122 CM. ( 48 IN.)	141 CM. ( 56 IN.)
TRACK	130 CM. ( 51 IN.)	150 CM. ( 59 IN.)
CG TO FRONT OF VEH	193 CM. ( 76 IN.)	228 CM. ( 90 IN.)
CG TO REAR OF VEH	-213 CM. ( -84 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	77 CM. ( 30 IN.)	92 CM. ( 36 IN.)
MOMENT OF INERTIA	5894 KGS ( 12994 LBS)	11020 KGS ( 24293 LBS)
VEHICLE MASS	3 KGS ( 6 LBS)	3 KGS ( 7 LBS)

Printing picture:

CRASH



107